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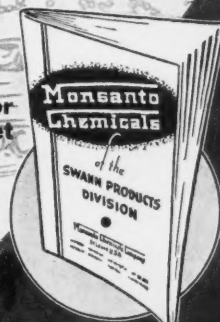
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SOAP

Reg. U. S. Patent Office

Volume XI
Number 11

November, 1935



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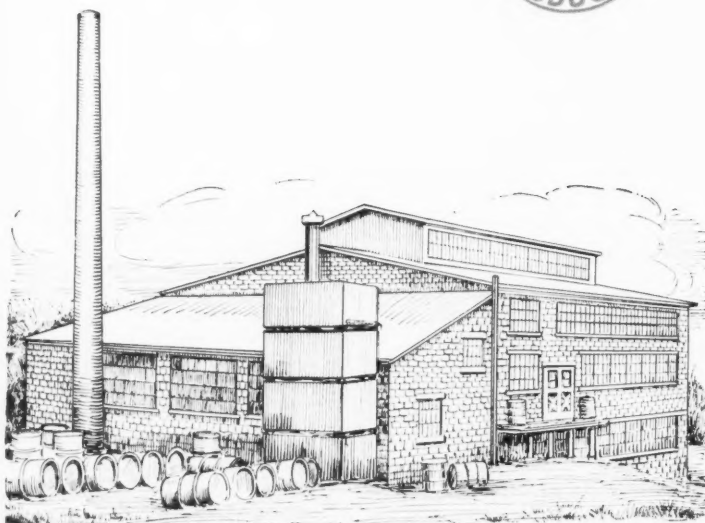
MAC NAIR-DORLAND COMPANY, INC
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History of PRODUCTS INC. Institution



Michael Lemmermeyer, President of Aromatic Products, Inc., has had 28 years' experience in the essential oil and aromatic chemical business. As sales manager of a leading aromatic manufacturer for the past 10 years, he has made a national reputation in the industry. He brings to Aromatic Products, Inc. a wide experience and a large acquaintance throughout the trade.



Arthur W. Mudge, Treasurer of Aromatic Products, Inc., a graduate of Massachusetts Institute of Technology, has been associated with the essential oil and aromatic industry since 1919, both in sales and in manufacturing. As founder and President of Organic Products, operating a plant at Mamaroneck, New York, he brings to Aromatic Products, Inc. an intimate experience with every phase of the business.



Edwin T. Booth, secretary is a member of a family famous as perfumers, has been connected with several cosmetic companies as perfumer and since 1922 has been perfumer for one of the leading companies in the industry. With him as associate, Aromatic Products, Inc. takes its place, with the many who know Mr. Booth personally and by reputation, as one of the leaders in the production of perfume specialties.



E. J. Cardarelli, director of research is a graduate in chemistry of Harvard. His research in organic chemistry has associated him with such companies as Monsanto, Mallinckrodt, New York Quinine and Chemical Works and Calco Chemical Co.



Charles A. Swan, for many years superintendent of the Antoine Chiris plant, later president and general manager of Antoine Chiris Co., and during the last three years associated with Arthur W. Mudge in Organic Products of Mamaroneck, is superintendent of the factory of Aromatic Products, Inc. at Stamford, Conn.

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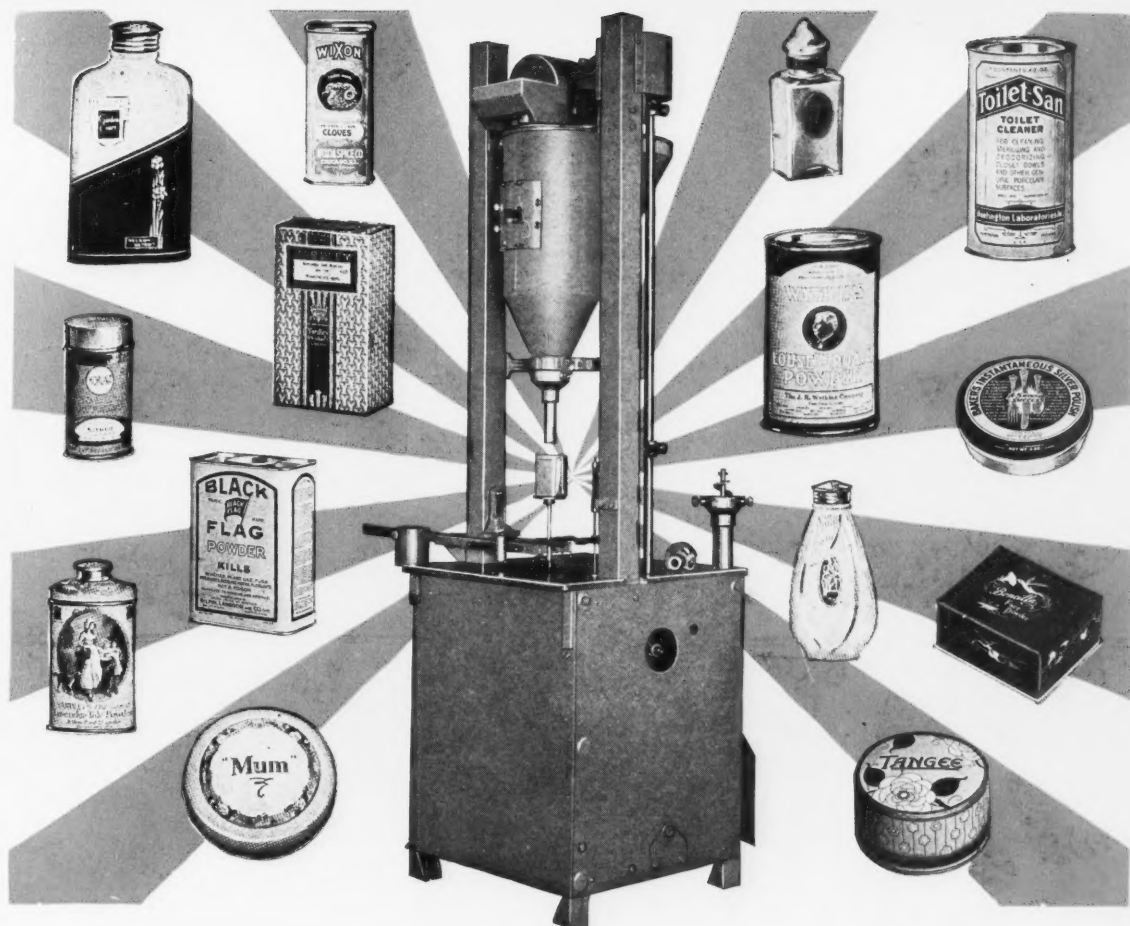
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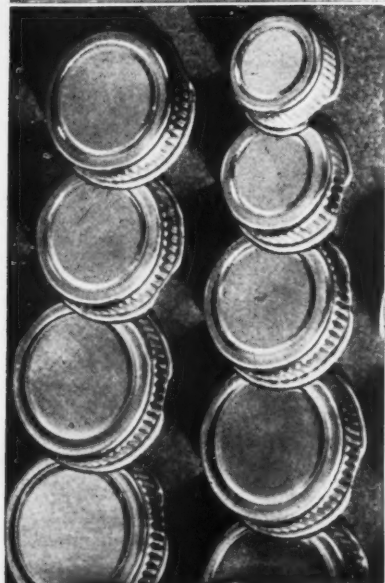
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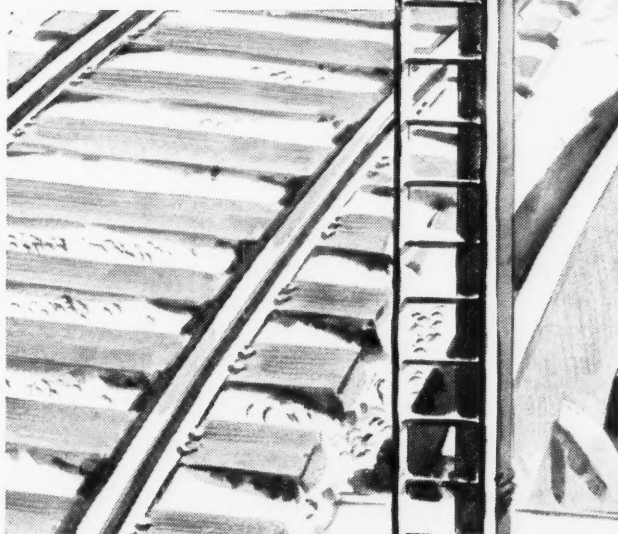
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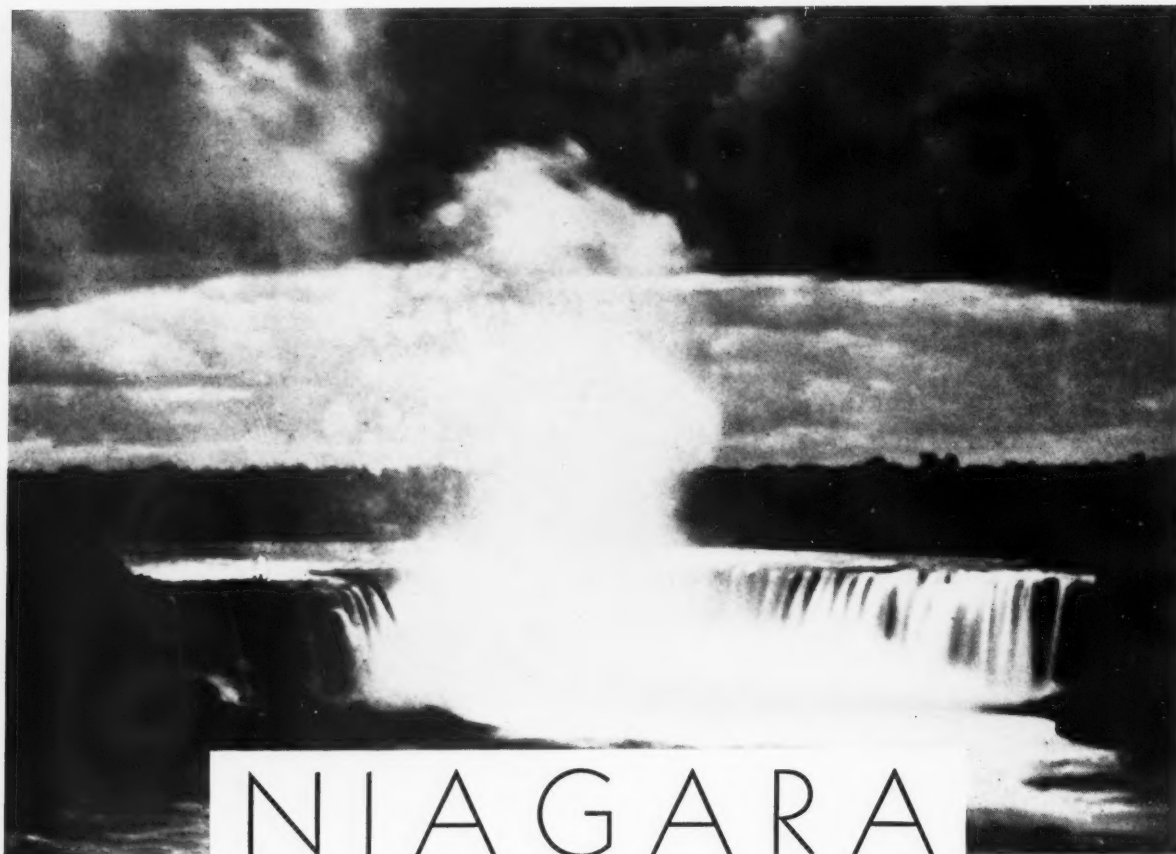
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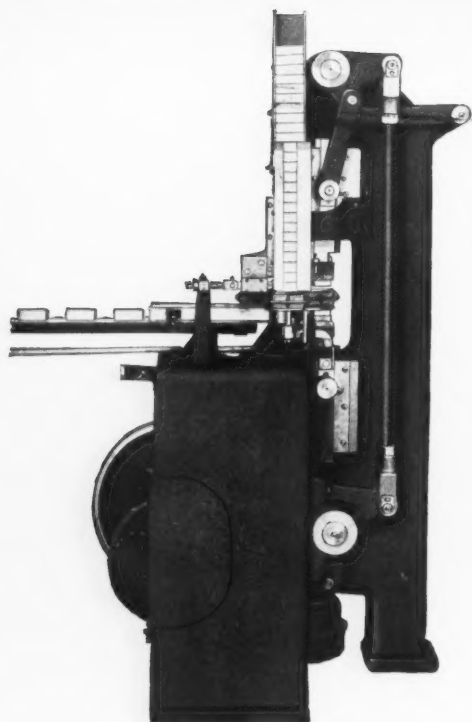


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SOAP

Volume Eleven

Number Eleven

As the Editor Sees It

THAT the soap industry is carrying its full share of the ever increasing tax burden of the country was brought out rather strongly in the recent annual report of one of the largest soap producers. Taxes, including excise, luxury, import, and others, more than doubled for the fiscal year ending last June 30. Where the total taxes had been some six million dollars for the previous fiscal year, they jumped to over thirteen and a half million for the period recently ended. If this bill for enjoying the privileges of modern government does not give the average business man a profound shock, then nothing will. Every soap maker, irrespective of size, is paying higher taxes in proportion. And, frankly, we do not believe that business has seen the half of it yet. All of which is food for deep thought.

— • —

THE contention of the makers of Lifebuoy Soap that they have the exclusive right to manufacture and sell a red "health" soap of octagonal shape and phenolic odor, has again been sustained, this time in the New York Supreme Court. The case of Lever Brothers Company against J. Eavenson & Sons, which required three weeks for trial, the presentation of much evidence and the hearing of many witnesses, is the first real adjudication of this "health" soap controversy. In the previous action, tried in a United States Court, the defendant withdrew midway in the case, and the decision went to Lifebuoy practically by default. In this latter case, however, Eavenson fought every inch of the way, and for this reason, the significance of the decision to the entire soap industry is very considerable.

By this latest decision, the general manufacture

and sale of "health" soap by numerous firms in the industry comes under the ban, as well as the use of the term "health soap." Any red soap of octagonal shape, or with a phenolic odor irrespective of its shape, cannot be sold. These features belong to Lifebuoy, the Court has held. The numerous private brands of "health" soap which have been sold by department stores and drug chains in large tonnage during recent years, will undoubtedly disappear along with the general "health" soap business.

Rather significant also is the demand for an accounting of profits. Apparently Lever Brothers do not intend merely to secure injunctions, but also to force payments of profits made in the sale of "health" soaps. It is quite evident that they intend not only to fight these cases to the last one, but also to use every effort to compel other makers of "health" soaps to disgorge any profits which may have been made in the business.

And now, let us look at this "health" soap controversy without consideration of courts, decisions, or injunctions,—just from the angle of plain honesty and common sense. At the risk of being accused of supporting one firm against the whole industry, or a large company against the small, we venture the opinion that had Levers not spent millions in popularizing Lifebuoy over the past ten years to bring it from well down the list up to the top in toilet soap sales, that the hundred and one other brands of red "health" soap would never have come on the market. That these other "health" soaps were put out principally to ride the wave of popularity of Lifebuoy, we believe is obvious to any disinterested observer who has studied the situation. Several well-known manufacturers of "health" soaps

have admitted this privately. The evidence at the trial proved it beyond a doubt. Even though there may have been other red soaps, with or without phenolic odor, or other octagon soaps on the market prior to Lifebuoy's American debut, we still believe that the wave of new brands of red "health" soap of the past five years was inspired by the wide advertising and success of Lifebuoy. We believe that justice has been done by the courts, and in this view, we feel that most soapers who consider the facts on their merits, honestly and disinterestedly, will agree.

IN the parlance of NRA days, the Federal Trade Commission is cracking down on more and more manufacturers who make fraudulent, untrue, and generally wild claims in their advertising and literature. Misrepresentation as to what a man can earn selling this or that, is coming in for attention of the Commission, as well as the firm which grossly misrepresents the things which its products will and will not do. In most instances, although not in all, the targets of the Commission are small, little-known firms. From the number of cases of this character which have come to our attention lately, we take it that the Commission is in the midst of a considerably more vigorous campaign against deliberate misrepresentation than was heretofore noted. And in these instances, we say more power to their efforts. This type of firm has always been a thorn in the side of the legitimate manufacturer, and the sooner he quits, the sooner he will cease to be a source of unfair competition.

APPARENTLY the American drug trade has gone completely crazy on the subject of alkalinity. It's alkalize with this and alkalize with that. To get rid of a hang-over, to become as strong as Pop-Eye, to have a radiant complexion, to become a red-hot successful salesman,—just alkalize. Nothing else is necessary. And to think that for all these years, the soap trade has been striving to get rid of alkalinity,—that soapers have boasted how little excess alkalinity their soaps contained. But what has been considered very bad for delicate skins all these years by the soap makers, is now heralded far and wide as just the thing for delicate stomachs, drooping arches, and falling hair.

The advertising claims for these alkalizers are

daring and all-embracing. They make the claims of the beauty soap, face cream, and tooth paste people fade to a pale pink. And how they must arouse in the breast of some soap makers that guilty feeling of lost opportunity,—particularly among some of the manufacturers of cold-made toilet soaps whose alkalinity has been a thing of beauty these many years,—that somebody else has stolen their thunder. To think how the drug fellows have made themselves rich by putting a halo of alkalinity around the old-fashioned acetanilid pain killers, while the originator of alkalinity, cold-made toilet soap, still works for starvation wages. And the drug people enjoy the added zest of watching the Food and Drug Administration read their advertising and tear its hair. But, as Joe Penner says,—there will come a day,—and then we look for alkalinity to be snatched from these usurpers, and returned to the bosom of the soap industry, its fond but reticent parent.

IN a recent bulletin to its customers, a soap manufacturer located in Iowa analyzed the cost of its tallow chip soap to show the close basis on which bulk soaps are being sold today. The bulletin also stated in part: "The soap business today is keenly competitive and conducted on a very narrow margin of profit. To stay in the soap business the manufacturer must make good soap and make it just as efficiently as his competitors. The margin of selling price over cost is too narrow, and competition too keen, to allow him to do otherwise. He must make good soap and sell it at a price based on raw material costs . . . the market on raw materials is the governing factor in the cost of bulk soaps, and the margin of profit so narrow that when tallow goes up, the price of bulk soap must go up too."

More soap manufacturers might join in to emphasize to buyers the narrow margin between cost and selling price of soap products today. The idea is still prevalent among many buyers that there is only ten cents worth of raw material in a dollar's worth of soap. This thought has been strengthened by those soapers who have failed to raise their prices as raw materials have advanced, and who have openly announced that they were still selling at the old prices. The inference that those who had raised prices were gouging the buyer, has been quite clear. To give the buyer the facts should help to dispel some of these wrong impressions.

Lever Wins Health Soap Case

Obtain Injunction Against Eavenson in N. Y. Supreme Court—Enjoined from Selling Red Carbolic Soap or Red Octagonal Soap—Also from Using Term "Health Soap"—Decision Says They Intentionally Imitated Lifebuoy—Decision Far-reaching in Soap Industry.

AN INJUNCTION restraining J. Eavenson & Sons, Camden soap manufacturers, and R. C. Williams & Co., New York wholesale grocers, from manufacturing or selling a soap, carbolic in odor or octagonal in shape which is of red, reddish, or coral color, was issued by Judge Miller in the New York Supreme Court on Nov. 4 in the suit of Lever Brothers Company, Cambridge, Mass., against Eavenson and Williams. The Lever suit was for unfair competition, alleging that the defendants were making and selling an imitation of Lifebuoy Soap. The decision which also banned the defendants from using the designation, "health soap," stated that the conclusion is inescapable that Eavenson intentionally imitated Lifebuoy Soap.

This is the second case to go to trial involving imitations of Lifebuoy Soap, the first having been that against the Jays Chemical Co. of Brooklyn in 1934 in which an injunction was issued by a United States District Court forbidding their making and selling their Lifeguard Soap, a red toilet soap of carbolic odor. This previous case, however, was dropped by the defendant following the issuance of a temporary injunction, no defense being offered when an application for a permanent injunction was made. The Lever-Eavenson case, in which the decision has just been rendered, however, required three weeks for trial and the examination of numerous witnesses. It represents the first complete court test of the "health soap" controversy, and the decision, because of this, is considered as likely to be far-reaching in the soap industry, and as likely to eliminate the large number of brands of "health soaps" now on the market.

The attorneys for the Lever Brothers Co. were DeForest, Cullon, and Elder of New York. For Eavenson, attorneys were Cook, Nathan, Lehman, and Greenman, also of New York. The case was tried before Judge J. Miller in the Special Term of the New York Supreme Court in New York County.

The text of the opinion of the Court follows:

This is an action for an injunction based on unfair competition. The plaintiffs are the manufacturers of Lifebuoy Health Soap. The defendant Eavenson manufactures a number of brands of "health soap," red in color and carbolic in odor. The defendant R. C. Williams & Co., Inc., sells one of these brands. (Reference hereinafter to "defendant" means the manufacturer, Eavenson). The plaintiff establishes as a fact the use for almost forty years of a collocation of various features with reference to Lifebuoy soap. This collocation embodies red color, carbolic

odor and octagonal shape. By the expenditure of large sums of money in advertising and sales expansion plaintiff asserts that it has developed and maintained a nationwide secondary meaning for this soap, and that it has thereby produced a distinctive commercial property or good will of great value.

From 1895, when the plaintiff commenced its business in the United States, "Lifebuoy" soap has constantly been reddish in color, carbolic in odor and octagonal in shape. At the time of its adoption plaintiff's collocation was not common to the trade. *Between 1895 and 1932, so far as is known, no other soap was sold in this state, or in the United States, that possessed plaintiff's collocation.*

Until 1901 plaintiff sold its soap in twin bars. Though plaintiff has sold its soap in a carton since 1901, the octagonal shape and reddish color of the bar have been constantly accentuated in its advertising. In 1915 plaintiff's octagonal soap was reduced to four ounces and has remained fixed at that weight throughout the past twenty years. While plaintiff has been selling soap rectangular in shape since 1923, this design is smaller in size and only three ounces in weight. During the past thirty five years the sale and advertising of the plaintiff's soap for toilet and bath purposes has been nation wide, and its soap was generally known as the only red carbolic soap. From about 1900 plaintiff has described its product as a healthy soap and as health soap. In 1909 the cartons bore the words "Lifebuoy Healthy Soap." It was originally advertised as Lifebuoy Soap, but since 1912 it has invariably been advertised as health soap. The word "Health" was placed upon plaintiff's carton in 1915 and was there described as "Lifebuoy Health Soap." In 1929 the word "health" was impressed upon the upper and lower sides of the bar. At the beginning of 1932 the term "Health Soap" was not in use by any soap manufacturer in the United States other than the plaintiff. The plaintiff's product, "Lifebuoy Health Soap," combined with the features of color, odor and shape, had acquired a secondary meaning by 1914, and was then and now is identified by this name and these features among the purchasing public throughout the nation.

The defendant Eavenson and its predecessor have been soap manufacturers in Philadelphia, Pa., and Camden, N. J., for over forty-seven years. They made and sold soaps at various times which were carbolic in odor, but none that were octagonal in shape until 1933. A red brand of soap was made by the defendant in 1914, but its manufacture was abandoned immediately thereafter. Before 1923, defendant made no other soap in this color, except in the following isolated instances, where a reddish shade was specified by the customer.

In 1899, and for about two years thereafter, defendant supplied one Nattan, a druggist in Washington, D. C., with a brownish red soap. The sale of this soap was abandoned in 1901. In 1899, it made some Red Cross soap for Johnson & Johnson, of New Brunswick, N. J. In 1901 defendant manufactured for Johnson & Johnson, of New Brunswick, a special output of soap of the aggregate price of \$1,169.00; in 1913 a small quantity of soap was made for the Curtis Publishing Co., of Philadelphia, for the use of its employees; in 1906 or 1909, an unknown quantity of soap was made for Jayne & Co., Boston; between 1915 and 1922 the defendant Eavenson made for H. K. Mulford & Co., of Philadelphia, a soap, reddish in color, of a high carbolic content, mainly for sale to veterinarians for bathing animals.

In 1923 defendant began to solicit the trade in connection with the sale of soap reddish in color. The bars were

oval in shape and carbolic in odor and were enclosed in rectangular blue cartons. Each carton was bordered by a yellow edge and had imprinted thereon in white letters the name "Jesco Skin Health Soap." Between 1924 and 1931 defendant made the following sales of this soap in New York State: Two in 1924, one in 1926, four in 1929, twenty-four in 1930, and eight in 1931. There were no sales made in this state in 1927. In 1925, three cakes of soap were sold, and in 1928, twenty-four cakes.

Testimony was submitted by the defendants that between 1914 and 1922, the defendant Eavenson made a red carbolic soap, oval in shape, which was in all respects similar to the soap which it placed on the market in 1923 under the name of "Jesco Skin Health Soap," except that the name "Eavenson's Skin Health Soap" was stamped on the bar, and that the soap was disposed of in buckets containing fifty cakes.

I do not find this to be the fact. I find that the manufacture of this soap was not continued after 1914. The contradictory testimony of the defendant's employees is unsupported by documentary evidence and is not convincing. No cake of soap made during this period has been submitted, and though cards showing the names and addresses of customers in 1923 were produced, there is no testimony from any dealer or consumer of a single sale of that soap within this interval of eight years. Mr. Jack Fink, the office manager of the defendant in 1920, and now in its employ, testified that this soap was not in existence in 1920 or at any time thereafter. This defendant did manufacture some Skin Health Soap in 1914, as its inventory at the close of that year showed a small quantity on hand. The inventory sheets for the following years were not introduced in evidence, though the court stated that they would be received if offered.

When, in 1923, the defendant placed its oval brand of red toilet soap upon the market under the name of "Jesco Skin Health Soap," it made the following public announcement:

"In thus presenting Jesco Skin Health Soap to the public of America, its makers, J. Eavenson Sons, Inc., of Philadelphia (Factory in Camden, N. J.) are giving to the world the *culminating* product of seventy-five years of intensive high grade soap making * * * Look for this carton at your store. (Italics the Court's.) * * * but of all the soaps we have ever manufactured we are proudest of this cake of soap and which we are confident will be a welcome guest in a majority of American homes."

Bernard Marks, an employee in the sales department of the defendant, testified that in 1933 he was directed by the general manager to order a die octagonal in shape "not too much like Lifebuoy," and that he instructed the manufacturer that before he made the die "to buy a cake of Lifebuoy Soap." Immediately thereafter, this defendant began selling soap octagonal in shape. As to this plaintiff, it was a second comer upon the market. Despite this circumstance, defendant made the shape, the color, the odor, the size, the width and the weight of its soap identical with the plaintiff's product, abandoned the term "Skin health" and stamped on its soap the word "health" which was being used by the plaintiff in describing its product, and, in addition, discontinued its carton, which was blue in color and then in use as a container. Impressed on the soap is the representative name of the dealer to whom defendant has made the sale. At present, the defendant impresses over 80 different names on the bars. This designed union of separate similar elements affords basis for the testimony that immediately after defendant's bars appeared on the market in 1933 they were classified as "imitation soap."

"Each one of these distinguishing features might be separately used and no harm result. But when all, or a number of them, are combined in a single package, and so arranged and exhibited, that when they strike the eye of the intending purchaser, possessed of ordinary intelligence and judgment, the false impression is likely

to be produced that the goods of the plaintiff are offered, it is the province of equity to interfere for the protection of the purchasing public as well as of the plaintiffs, and for the suppression of unfair and dishonest competition. The true test, we think, is whether the resemblance is such that it is calculated to deceive and does in fact deceive the ordinary buyer making his purchases under the ordinary conditions which prevail in the conduct of the particular traffic to which the controversy relates" (*Fisher v. Blank* 138 N. Y. 244, 251, 252).

Ordinarily, the coloring matter, if functional, is free to all. Where the color is non-functional, it may not be copied if it has become associated with the plaintiff as its manufacturer or source. (*Champion Spark Plug Co. v. A. R. Mosler & Co.*, 233 Fed. Rep. 112; *Crescent Tool Co. v. Kilborn & Bishop Co.*, 247 Fed. Rep. 299).

In the instant case the unnecessary imitation of non-functional parts is patent, and the appearance of the plaintiff's soap had come to represent the plaintiff as its origin.

Defendant asserts that the name "Lifebuoy" is the distinguishing feature of plaintiff's soap. The proof is clear that at least by 1914 Lifebuoy had become generally known and widely identified by distributors and the consuming public to be reddish in color, octagonal in shape and carbolic in odor. Defendant also insists that it distinguishes its soap by the name impressed on one side of the cake. If the name of each dealer was the same, this argument would still remain groundless. General resemblance, not incidental differentiation, is the test. The effect of such resemblance is significant. Without an advertisement for the ten-year period preceding December 1933, defendant succeeded at once in inducing some fifty-nine different dealers in various parts of the United States to become purchasers of its octagonal soap.

The defendant in reproducing plaintiff's color in combination with the shape and odor of plaintiff's soap was "motivated by a design to profit by the plaintiff's reputation, investment and advertising, rather than by any utilitarian or functional considerations" (*American Chain Co. v. Carr Chain Works, Inc.*, 141 Misc. 303, 308). It is not enough that the distinguishing marks may be identified by a careful and discriminating purchaser. The casual or ordinary purchaser must be protected. A second comer should mark his goods to avoid deception of the public. The acts of this defendant were deliberate and it is clear that defendant's actual purpose was to mislead the public and to induce it to believe that it was buying the plaintiff's product. Actual unfair competition has resulted from the fraud of the defendant.

"That no deception was practised on the retail dealers, and that they knew exactly what they were getting is of no consequence. The wrong was in designedly enabling the dealers to palm off the preparation as that of the respondent" (*Warner & Co. v. Lilly & Co.*, 265 U. S. 526, 530).

"We rest our conclusion here upon the fact that the color was adopted in part as a means of aiding the contemplated fraud, and that, if its adoption was also in part innocent, there is here a confusion caused by defendant; that the burden is therefore upon defendant to see to it that ultimate fraud does not result from this confusion; and that, so far as defendant cannot safeguard this result, it may not use the color" (*Coca-Cola Co. v. The Gay-Ola Co.*, 200 Fed. 720, 724-5). (See also *Nu-Enamel Corp. v. Nate Enamel, Inc.*, 243 App. Div. 292, affirmed without opinion 268 N. Y. * 84; *Mainzer v. Gruberth*, 237 App. Div. 89; *Brillo Manufacturing Co. v. Levine*, 236 App. Div. 488; *Kallus v. Bimbleck Toy Manufacturing Co., Inc.*, 229 App. Div. 313; *Metz v. Blackman*, 153 Misc. 171.)

Plaintiff was not obligated to institute suit until it had obtained evidence that the unfair competition of the defendant was in fact injuring its business.

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Consumer Contest Sells Soap

Success of Colgate-Palmolive-Peet Contest Suggests Variations Which Might Be Popular

IN the past few months, the Colgate-Palmolive-Peet Co. sponsored in the Syracuse, N. Y., district, an unusual "write about the product" contest with decisions as to the winners determined mathematically. The C-P-P contest eliminated the stumbling block which sometimes interferes with wide consumer participation, since, as this contest was set up, little writing ability was required. Each week for a pre-determined period, announcements were made locally by radio, in newspapers and through grocers and other distributors of the company's soap that prizes would be awarded to the person able to write a sentence with the highest and lowest scores.

Each week, the 26 letters of the alphabet were given arbitrary values such as, for example, six points for A, fifteen points for B, eight points for C, and so on for the entire alphabet with numbers from one to twenty-six credited to each letter. The highest possible score in theory would be 26×26 or 676, the lowest theoretical scoring, twenty-six. Actually, one contestant said complimentary things about "Palmolive" soap to the extent of 595 points, so far an all-time high in this form of contest. Public interest in the contest was widespread, with substantial awards given each week. It was indicated that sales in the Syracuse district increased by more than 20 per cent.

While this particular contest is, of course, copyrighted, there are many variations possible, certain of which should prove equally popular with the consuming public with its love of contests. For example, there is a contest recently copyrighted as "Tel-a-Tale" but not yet used by any large advertiser. In this promotion, each contestant is called upon to write a sentence about the product advertised using only the names found in any recognized directory of names and addresses such as a telephone book or social list. The full name as listed may be used, or any part of the name consecutively or separately. For example: In the name "Smith", the contestant may use the full five letters, or any part such as *Smit*, *Smi*, or merely *Sm*, or may use just one letter.

As an example of a completed sentence, we might use a telephone directory selecting the following companies and persons:

Congo Tire Co.
Soap (a publication)
Isham Garden Apartments
Always Perfect Clothing Co.
My Florist, Inc.
Preference Glove Co.

Assembling the *italic* words gives the sentence: "Congo Soap Is Always My Preference."

Many other contest variations are, of course, possible of development, some copyrighted and others waiting to be originated. With the radio in its present state of development, the contest is considered by many advertisers as almost an essential to check up from time to time on the volume of listeners to a program, and in addition, the contest usually demonstrates a direct increase in sales of the product to the consuming public wherever it is conducted.

Canada's exports of soap in September were valued at \$150,693 and imports \$34,089. This was an increase in exports of \$101,871 compared with a year ago and a decrease in imports of \$7,917. The leading purchasers of Canadian soap were United States, \$75,534, and United Kingdom, \$40,502. Imports from the United States amounted to \$21,247, including \$13,000 for common or laundry soap.

The index of employment in the soap industry stood at 103.1 in September as compared with 98.0 in August, 98.6 in September, 1934, and a base figure of 100 for the 3-year average of the years, 1923, 1924 and 1925. The pay roll index registered 99.4 in September, 1935, as compared with 93.8 in August and 87.3 for September, 1934.

The sixth reunion of the International Commission for the Examination of Fats was held recently at the Royal Society of Great Britain in London. E. R. Bolton presided and representatives of France, Germany, Czechoslovakia, the United Kingdom, Holland, and Italy attended.

Stocks of refined cottonseed oil on hand in United States as of Sept. 30, 1935, totaled 287,346,578 lbs. as compared with 450,605,445 lbs. on the same date last year. Stocks of crude oil were 74,537,279 lbs., Sept. 30, 1935, as compared with 74,462,111 lbs., Sept. 30, 1934.

The annual convention of the Beauty & Barber Supply Institute held recently at the Hotel Commodore, New York, attracted an attendance of approximately 750 jobbers and 250 manufacturers. An exhibition was held in connection with the meeting at which 185 manufacturers of equipment and materials were represented.

SHAMPOOS

A study of the market . . . and the "best sellers" . . . a discussion of composition, clarification, perfuming, analysis, and packaging.

By RALPH H. AUCH

PRESENT day shampoos are almost legion. They include liquid and jelly shampoos, soapless liquids including the sulfonated oil and sodium lauryl sulfate types, soap powders and soapless powders. Liquid soap shampoos unquestionably outsell all the other types put together,—in fact, they probably represent nine-tenths of the business. The reason is not far to seek because they are the most convenient for use not only in application but in ease and thoroughness of rinsing. Hence, liquid soap shampoos only will be discussed here, but in considerable detail.

Just what does the market survey disclose? A recent small but geographically widespread investigation indicates that shampoo is used in 72 per cent of the homes while 28 per cent still use or prefer bar soap for shampooing. It is quite possible that the 72 per cent figure is somewhat high. Some soap users may claim to be shampoo users because they think that by so doing they appear more modern, more sanitary, more sophisticated or what not.

Whether the figure is actually a bit higher or lower, it is still worth catering to. Admittedly the potential market for shampoo is not as great as that for laundry or toilet soap or face powder for example. However, it is certainly greater than that for eau de quinine, after shaving lotion, depilatories, nail polish or under-arm deodorants that are successfully merchandised in spite of their relatively "thin" markets.

Is the market dominated by one, two or a few brands? By no means, even though the mention of shampoo brings perhaps only two or three brand names to mind. A sizeable survey in the Middle West completed a few months ago shows the leader enjoying about 12.6 per cent of the call.

A second brand is close behind with 11.9 per cent. A third brand comes through with 10.5; a fourth with 9.5; a fifth showed 9.3; while the sixth, seventh, eighth and ninth were the brand choices of 3.7; 3.1; 2.5 and 1.7 per cent respectively of the consumers. These nine brands total about 54 per cent and the remaining 46 per cent of the consumer demand was divided between innumerable brands, some of which must enjoy at best only limited local call.

It is only necessary to consider that in the same survey, the household soap chip sales were far more concentrated to realize that the shampoo market can be cultivated. To be specific, the top nine soap chip brands accounted for 84.9 per cent of total sales. The figures ran 26.5; 19.2; 18; 6.3; 4.5; 3.7; 3.2; 3.1 and 2.4 per cent for numbers one to nine in brand choice of soap chips and granules.

The five leaders in sales in the shampoo survey were analyzed chemically and found to contain 24.9; 20.4; 24.2; 21.0 and 24.5 per cent anhydrous soap. It would appear then that a concentration of 23 per cent, since it is an approximate average, is a good one to standardize on. However, a moot point is whether or not a newcomer could advantageously run his concentration higher, i.e. 27 or 28 per cent anhydrous soap. He could build his sales story around being more economical, giving a more copious lather and "a little goes a long way." On the other hand, it would be equivalent to giving a larger bottle so far as bringing the user back for the next one



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is concerned.—a permanent handicap in both cost and rate of turn-over.

These same sales leaders were checked for their pH value and the leader was found to run 8.5; the runner-up 7.7; the "show" runner 7.2; number four 8.5; and number five 10.5. These figures are for the shampoo as it came from the bottle and not as diluted with water for use on the hair and scalp. Since a pH of 7.0 is neutral, all are on the alkaline side from very slightly to quite markedly so. In fact, a pH of 10.5 is appreciably higher than many laundry soaps in the dilution in which they are ordinarily employed.

So far as pH value is concerned, no conclusion can be drawn with such a wide variation. Further, the established brands may or may not take pains to maintain as constant the pH value as found in the individual bottles analyzed. Just what is the consumer's reaction? In an endeavor to learn it a 20 per cent solution of straight potash coconut oil shampoo was made up with a pH of 10.5. Half was boiled with additional coconut oil to lower this figure to 7.5. Obviously, instead of boiling

the solution with additional coconut oil, a bit of clean light-colored oleic acid of good odor could have been added. Had this been done however, some might not have been content with the outcome of the test, feeling that the potassium oleate might have lowered the lathering qualities, lessened any coconut oil harshness, or what not. Both were tinted and scented exactly alike and submitted in two duplicate bottles labeled identically alike but marked "A" and "B" respectively to a testing group of over 250 women.

Among the testers who regularly use a commercial shampoo, 50 per cent liked the high pH, while 42 per cent liked the low and 8 per cent had no choice. Of those who ordinarily use their regular toilet bar soap for shampooing, 45 per cent preferred the high pH, 47 per cent chose the low and 3 per cent had no choice. These figures are too close to be positively and definitely conclusive. It would appear, however, that shampoo manufacturers have educated their users to accept a product with a higher pH than the bar soap users have come to expect.

That the shampoo with the high pH rinses from the hair more easily was confirmed by 55 per cent of the testers. That it leaves the hair and scalp in a nicer condition was the opinion of 56 per cent of the group. Hard water users were the more enthusiastic on these two points. A map of the hard water areas of the United States when given due weight along with the rural market that has chiefly only hard water, combines to make a factor that cannot be overlooked. Remarks favoring the shampoo with the high pH value include: "requires less for a shampoo;" "makes curly hair curlier;" "seems to clean more thoroughly;" "seems to clean more easily;" "makes more lasting suds in hard water;" "makes blonde hair look lighter;" "leaves white hair white—not yellow streaked;" "removes grease and dirt much better;" "makes the hair light and fluffy" and "fine for children's hair." On the other hand, the reaction of the few puts an element of doubt in one's mind. Unfavorable comments include: "makes the scalp smart;" "tends to bleach dark hair;" "makes hair hard to manage;" "draws the face;" "leaves the hair harsh;" "leaves the hair fly away" and "stings the skin and eyes."

Anyway, it is a case of pay your money and take your choice. That is exactly what the big sellers have done since they are not agreed on the pH value. This test was made with straight saponified coconut oil and some skins simply will not tolerate it. It is interesting to note in passing that some 11 per cent of the public will not use a hard water (coconut oil) soap, even though this type of soap carries as much as 7 per cent of super-fat. When the shampoo is made replacing the coconut in part with olive or other oils, some of the unfavorable comments can undoubtedly be silenced. Then too, the alkali used for saponification was straight potash, and it is the contention of one outstanding authority that potash is eight times as toxic as soda. Far be it from this writer to express an opinion, however, so he is content to state that brilliantly clear shampoo can be and is being made using a mixture of potash and soda lyes up to a 50-50 ratio for saponification.

Referring again to the leaders in the survey, who may be looked to as representing good commercial practice, no agreement is to be found in alcohol content. Ten, three, five, three and forty-seven per cent are the alcoholic concentrations of the sales leaders. (The reader cannot check back from the alcohol content to determine the brand names because they are not in order, being purposely mixed up. Anyway, it would hardly be fair.)

Now, just why the alcohol? Does it help clarify a shampoo liquid? Possibly, even probably, in some cases, but not a straight twenty per cent solution of potash coconut oil soap. Such a solution was made up and from one to seven per cent alcohol by single per cents was added to separate portions and filtered. The flocculent precipitate that formed subsequently was almost as voluminous in the seven per cent alcoholic solution as in the one with no alcohol addition.

Does alcohol lower the freezing point sufficiently to be of value in transit in winter, or to cold climates? Using twenty per cent potash coconut oil soap in a freezing bath, the straight water solution froze at 24°; five per cent alcoholic solution froze at 20°; and ten per cent at 19° Fahrenheit. The freezing point lowering hardly justifies the expense of the alcohol. Alcohol does make the liquid more viscous with each added per cent, however. This is to be expected since one gram of sodium oleate, for example, will gel about three and one-quarter mils of water, twenty-seven mils of ethyl alcohol and thirty-eight mils of iso-propyl alcohol.

Just what advantages attend a more viscous liquid? None come to mind except perhaps that the shampoo will not run off a bald pate quite as fast in use. Alcohol does make it easier to incorporate the perfume oil and instead of adding it to the kettle it may be cut in twice its volume of alcohol and added to the shampoo after it has cooled and has been diluted, thus lowering the loss by volatilization and eliminating any decomposition in the kettle. Alcohol also speeds saponification and facilitates the reaction going more nearly to completion. Insuring that the reaction goes to completion is both important and difficult, particularly in the case of the cold made process.

If alcohol is employed it obviously should be the tax free specially denatured. The specially denatured alcohols that are authorized for use in shampoo and liquid soap include:

No. 1 (400) Denatured with 5 gallons of approved wood alcohol per 100 gallons alcohol.

No. 3-A (431) Denatured with 5 gallons of commercially pure wood alcohol per 100 gallons alcohol.

No. 3-B (431) Denatured with 1 gallon pine tar per 100 gallons alcohol. This formula is limited of course to use in tar shampoos.

No. 31-A (646) Denatured with 100 pounds glycerin U. S. P. and 20 pounds hard soap, good toilet grade per 100 gallons alcohol. Soap makers are reluctant, no doubt, to procure glycerin and hard soap in their specially denatured alcohol unless they can work out an arrangement with the alcohol denaturer, "You buy all your soap and glycerin from me for denaturing purposes, and I'll buy all my alcohol requirements from you." Even then, it does not appear to be the part of wisdom to use alcohol denatured with hard toilet soap which may cause filtering difficulties or subsequent clouding of the finished shampoo.

No. 31-B (Prohibitive) Denatured with 5½ gallons oil peppermint, 1¼ gallons eucalyptol, 4 pounds menthol crystals. The denaturants run the cost up excessively and the formula appears far better suited to tooth paste or possibly shaving cream than shampoo.

No. 31-C (1671) Denatured with 33 pounds citric acid, 33 pounds menthol per 100 gallons. The same comments go equally forcefully for this as for No. 31-B.

No. 40 and 40 M (426) Denatured with 3 ounces brucine sulfate and $1\frac{1}{2}$ gallon of either acetone or iso-propyl alcohol. This formula while not specifically authorized for use in liquid soap or shampoo, a permit for use may be secured by responsible manufacturers. It has the advantage of low cost and complete miscibility with water in all proportions. The 40-M formula with iso-propyl alcohol imparts no off or by odors, whereas there is the slightly sour note in the No. 40 denatured with acetone.

The cost of specially denatured alcohol is a base price plus the cost of the denaturants. The numbers in parentheses are the prices comparably expressed as whole numbers. It is at once apparent that the choice should be made from between No. 1, 3-A, 3-B, and 40-M or possibly 31-A.

THE shampoo leaders are either colorless or amber, while most of the nondescripts are tinted the characteristic fluorescent yellow-green of fluoresceine. To carry a quality suggestion, it would appear that most any shade other than that imparted by fluoresceine is good. Yet, this very tint is used by a newcomer of the soapless type selling at \$1.00 in six ounce size that decries the use of soap! "No longer need the luster and the color of your hair be killed by a sticky, gummy soap film." With the color association of cheap liquid soap shampoos and hospital green soap for generations before it, what

a task it will be for this soapless shampoo carrying the corporate name of one of the largest soap makers to live down its fluorescent tint.

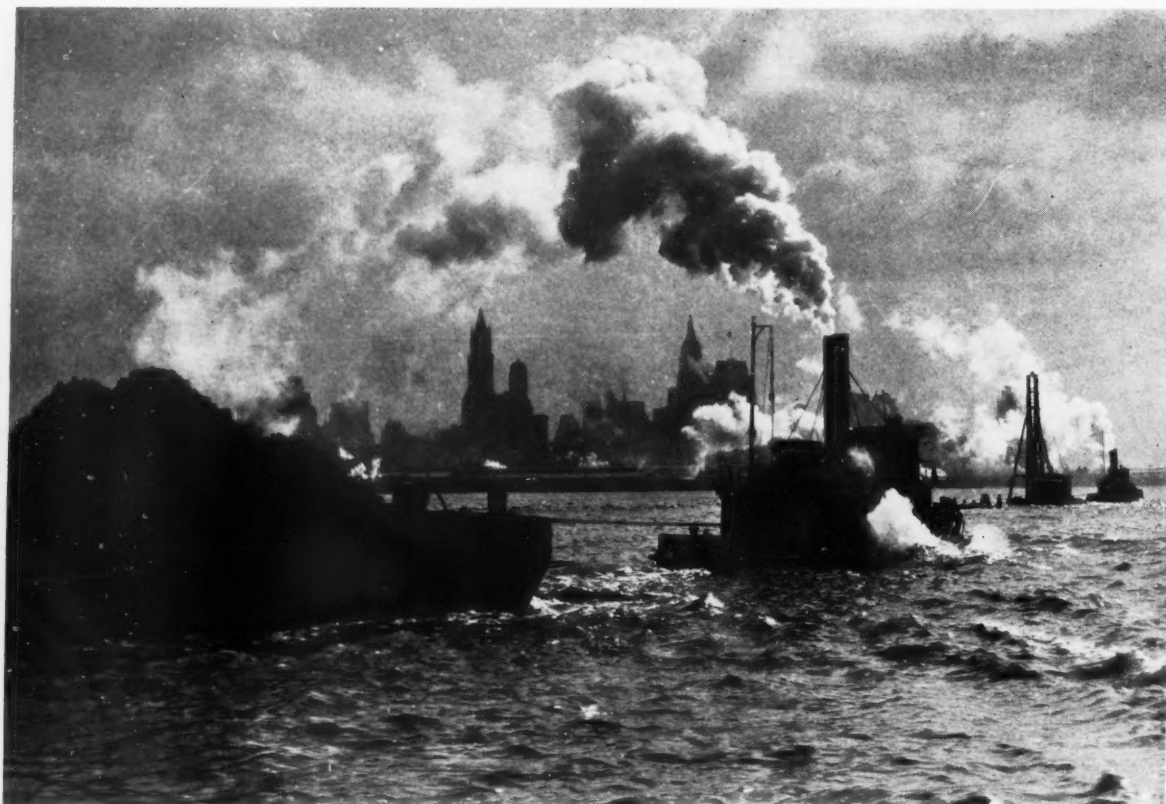
Referring to the sales leaders once again and finally, there is no agreement among them in choice of odor. In consequence, the consuming public has not come to associate any particular odor with shampoos. This leaves the door wide open for a bit of ingenuity and compounding skill. As little as one and a quarter pound of good perfume oil will scent one hundred gallons of shampoo. Accordingly, the soap manufacturer should be willing to extend himself for perfuming his shampoo and spend two or three times or more what he spends per pound for his oils for toilet soaps.

If the perfume in a toilet soap is an important factor in sales it is doubly so in a shampoo. One cannot haphazardly use a good toilet soap odor and expect it to stand up in an aqueous soap solution i. e. shampoo. It is more than likely that it will not. A perfume oil that stands the abuse of the cold soap process is more likely to stand up in shampoo, but who ever smelled a cold-soap odor worthy of a place in first class shampoo? The so-called "stabilizers" may be found helpful in certain perfume compounds for use in shampoo.

If one has a good compound that shows promise in the freshly prepared shampoo, there is no real substitute for an age test to determine shelf life. Sometimes, how-

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Ewing Galloway.

ALTHOUGH the soap industry has always been the chief consumer of by-product fats,—fats and oils unsuitable or left over from the requirements for foodstuffs,—it finds itself today going further and further into the field of fatty by-products in search of new raw materials. High prices for fats have driven many soap makers down the quality scale to find cheaper materials which they may by refining bring up to the standards necessary for their manufacturing requirements. In some instances, this has been overdone, refining processes have been inadequate, and finished products have reflected the low quality of the raw materials. Nevertheless, the stimulus to low grade fat refining has been great during the past year, for only when prices are high and demand is active, does the recovery and refining of the lower grade by-products pay. This is noted in the impetus which has been given to the wider recovery of foots and low grade greases, to new refining processes, and to increased and improved fatty acid production. Marked process improvements during the past few years have made available for the soap kettle fatty materials which previously could not be used. The constant search by the soap industry for new supplies of cheap fats, spurred by competition, has been the chief motivating force behind these technical advances.

Since the history of early soap production is buried

Thousands of tons of grease-laden garbage are dumped at sea every day—a tremendous potential source of fatty raw material for the soap industry which some day it may be compelled to utilized in full.

deep in obscurity, only a guess can be hazarded as to the types of fat the early soapmakers employed. No doubt, in regions where vegetable oils were plentiful and used for many purposes, soap contributed its share to prevent problems of over-production from wracking the brains of those who produced the oils. In regions where oil-producing plants were not so plentiful, no doubt the zest for cleanliness led the pioneer to mix fat drippings with wood ashes to produce soap. Thus, step by step, changes have come about and are still coming about in the wake of generally changing conditions.

The trends in consumer demand imply certain requirements in the line of raw materials for use in soaps. Today in general a hard soap is preferred to a soft one, and white soap is favored over colored for toilet use. As far as laundry use is concerned, there has been a trend in the direction of white soap rather than yellow, and, more recently, towards the use of flakes, chips, beads, granules, and various types of powdered soaps for general laundry use. In addition, there has been a demand for types of soap which will serve both simple household

Competition forces the soap maker further into the field of recovered low-grade fatty raw materials. This is the first of a series of two articles discussing the trend in oil and fat requirements of the modern soap industry.

The Search for By-Product Fats

By MARGARET J. HAUSMAN

laundry and toilet soap purposes at the same time. The preference for hard soaps rather than soft ones implies the use of nut oils, such as coconut and palm kernel oils, and of tallow, rather than soft oils, such as cottonseed and peanut oils.

Oils, therefore, may be divided into general groups as far as their abilities to satisfy certain consumer requirements are concerned: tallow kinds, nut oil kinds, and soft oil kinds. Such a classification, however, is apt to be rather inadequate in expressing the degree of interchangeability of these oils. The soapmaker must take into consideration numerous vital technical factors which affect the use of particular oils in any general class, both separately and in mixtures with other oils. Some of these factors that most nearly approach practical requirements are consistency, lathering properties, cleansing properties, color, odor, effect on the skin, and keeping qualities.

Consistency of fats and oils is generally an index of hardness in the finished soap, besides affecting firmness of texture and tendency not to crack. Lathering properties must be considered from a number of different points of view,—the ease with which the lather is formed in hot and cold water and in hard and soft water, the type of lather formed, and its texture and quality, on all of which are dependent definite cleansing properties of the soap. Oils, such as coconut oil, which forms lather that has a tendency to dry quickly, are undesirable insofar as they have an irritating effect on the skin. These oils therefore should not be used in large quantities in toilet soaps. However, an oil such as coconut must be included in soaps which are to be used in cold water and in hard water because of the readiness with which soap made including it lathers even under most unfavorable conditions. On the other hand, inasmuch as tallow, for example, is more desirable than coconut oil from the point of view of quality of the lather, it is to be favored over

an oil such as coconut oil for use in soaps for laundries, where the hot water employed eliminates the problem of slow solubility of pure tallow soap under ordinary conditions. Softer fats are being increasingly used for soap powders. But, the soft oils, on account of their high content of unsaturated acids, yield soft soaps, and have a tendency to turn rancid easily. Consequently they are undesirable for general soapmaking purposes.

Other technical factors that are also reflected in practical characteristics of soaps are:—saponification value, which is an index of the amount of alkali that is going to be required to saponify the fat, and how much glycerine can be expected to be recovered, as well as an index of the value of the oil or fat for soapmaking; free fatty acid content, which affects the odor and is in part an index of the state of purity and freshness; and the content of moisture and unsaponifiable matter, which is an index of the amount of actual glyceride available for soapmaking.

For many years, tallow, coconut oil, palm oil, and animal greases have been the leading fats used in soap manufacture. Soap can actually be made from any animal or vegetable oil, but in commercial practice the choice of oil is governed by the ease with which it fulfills the requirements already discussed and the convenience with which it may be treated to have imparted to it desirable characteristics it does not initially possess. The development of processes such as hydrogenation and improved refining methods have led to the actual salvaging of lower grade oils for edible and other purposes where formerly very little of the low grade oil could be used on account of its extreme crudity. This situation furnishes one of the most important reasons why the soapmaker must be on the alert for new sources and for practical methods of cleaning up lower grade fats. The competition in buying which he is now facing from other manufacturers in the field of his classic raw materials has made and is making use of old stand-bys increasingly difficult.

More inedible tallow is consumed for soapmaking than any other single fat. In 1934 inedible tallow comprised 40 per cent of all the fats and oils used in soap manufacture in the United States. Large quantities of tallow come from slaughter-house-by-products of diversified natures, shop fats, suet, trimmings, and meat wastes from retail butchers, meat markets, and hotels. Most tallow is prepared by steam rendering, which consists of placing the material to be rendered in a digester by passing into it for a period of time varying anywhere from 5 to 12 or 15 hours, steam under pressure at a temperature of 120-130° C. When the steam is shut off, the apparatus is allowed to cool, and the fat is skimmed off the surface of the water in the digester. This method is economical with regard to fuel consumption and produces a yield greater than that produced by other methods.

Tallow is ordinarily a firm hard fat with a titer of 40° or more and generally consists of beef fat. Some tallows are an excellent quality, so white in color and low in free fatty acids that they stand up well against edible tallows, but federal regulations forbid the diversion of such material for food uses. The following grades of tallow are recognized by the Institute of American Meat Packers:

1. "Fancy"—is usually sold "maximum 3 per cent acid," 42-44 titer, 1 per cent M.I.U.

2. "Prime Packers'" is a standard tallow. The bulk of the packers' product is of this grade. It is sold in the winter "maximum 3 per cent," in the summer, "maximum 4 per cent acid," runs 42-43½ titer, and is sold basis 1 per cent M.I.U. It is light in color, bleaches not to exceed 2.8 red and 25.0 yellow by the Lovibond color test. It is made from the best grade of packers' inedible stock.

3. "No. 1" usually runs 8 to 14 or 15 per cent acid, but is sold by most packers on a basis of 10 per cent acid. It may be either a greenish or brownish tallow, or sometimes "yellowish." It is rendered from the less desirable parts of the animal, containing some spoiled fats and being "off" in odor and flavor. It bleaches to about 7.0 red and 31.0 yellow (Lovibond). This grade is given various names by different producers, but is classed by the trade as No. 1 if it conforms to these specifications. It is sold on a basis of 2 per cent M.I.U.

4. "No. 2" is sold on the basis of 2 per cent M.I.U. and usually contains 25-30 per cent acid, but the true "No. 2" is sold on the basis of 40/40 (40 per cent free fatty acids and 40 titer). It is too dark in color to be read by the Lovibond test. This tallow is made from the remaining dark-colored stock and poorest grade offals, such as gut fats, as well as catch-basin skimmings. Frequently catch-basins are skimmed and the skimmings rendered and put into "No. 2." Some tallow of this grade runs up to 43 titer. This grade is sometimes classed as "B" tallow. It is also sometimes described as brown grease.

5. "City tallow" is a renderer's product. It is produced from materials that are gathered daily and

promptly rendered. It is a product of fairly good and uniform quality.

6. "Country tallow" is a lower grade of renderer's product than the grade known as city tallow. Made from fats and materials collected at intervals and accumulated, it varies greatly in free fatty acid content and color.

AT present, grease is the animal fat that ranks next to tallow in volume of use in soap manufacture. In 1934, grease of various kinds made up around 9½ of the total consumption of fats in soap, coconut oil and palm oil ranking between it and tallow. Coconut oil makes up about 23 per cent and palm oil 10 per cent of the total.

There are widely varying sources from which grease is obtained and therefore there are many different gradings of products. Grease is actually, technically, inedible lard. No one important source furnishes the chief raw material for any of the grades of grease. Some grease is obtained from garbage by steam rendering or by solvent extraction. Some comes from the manufacture of animal skins such as sheep, goat, and rabbit skins. Grease is also obtained from bones by solvent extraction, before the bones are sold for glue manufacture. Tankage provides considerable quantities of grease, and grease is also extracted from fur trimmings and scrapings, fowl entrails, spoiled fowls, and from rabbit-dressing plants. Some recovered greases are obtained from tanneries and textile mills. Wool grease, or lanolin, serves some industrial uses of fats, but is not classified as a fat, technically speaking, inasmuch as it is more than 50 per cent unsaponifiable.

Packing-house grease is generally preferred commercially to other types of grease. It is essentially prepared from hogs which have been condemned. It is graded as white, yellow, and brown grease, the white grease being prepared from animals from which the viscera have been removed or from viscera which have been freed of contaminating materials. It is made from clean and fresh material. Yellow grease is produced from condemned hogs that have not decomposed, but are tanked whole. Brown grease is produced from offal of various kinds and it is an inferior product. The lower packer grades of grease are sometimes designated as "soap stock."

Hog greases make a soft soap that is fairly soluble in cold water and yield a slow, lasting lather. Greases can be blended with other fatty materials for the preparation of soaps. Their odor is reduced and their color improved by deodorizing and bleaching. Low grade greases, such as garbage grease, are split to fatty acids and distilled. Greases are used mostly in certain industrial soaps and in cheaper household products, such as yellow laundry soap, soap powders, etc.

The following grades of grease are defined by the Institute of American Meat Packers:

1. "Choice White" is an inedible grease, similar to lard in color, generally 38-39 titer, runs "maximum 4 per cent acid," 1 per cent M.I.U.

2. "A White" is 6-7 per cent acid, slightly darker in color than "Choice White," 1 per cent M.I.U.

3. "B White" is 8-12 per cent acid, sold 1 per cent M.I.U. It is poorer in color, dark or yellowish, "off" in odor and flavor; the color is lighter than 2.5 red and 25.0 yellow (Lovibond).

4. "Yellow" runs 15-25 per cent acid, sold on a basis of 2 per cent M.I.U. It is yellowish in color, but never brown; it is made from portions of the animal that yield a darker grease, and is really an offal product. In some small plants all grease materials are rendered together, and the resulting product is known as yellow grease; the color is about 30 red and 110 yellow (Lovibond).

5. "Brown" is sold on the basis of 40/40 (40 per cent free fatty acids and a titer of 40), and 2 per cent M.I.U.; made from all refuse materials, such as catch basin skimmings, floor sweepings, etc.

6. "House" is obtained from the rendering and degreasing of used fats or shortenings from hotels and similar wastes. A renderer's product, this house grease does not bleach well, but is usually low in acid because it is handled or rendered quickly; it is sold on a basis of 3 per cent M.I.U.

7. "Garbage" is grease extracted from garbage, usually by municipal reduction plants; it is sold on a basis of 3 per cent M.I.U.

8. "Extraction" is grease extracted from partially degreased tankage, in turn sold for fertilizer. It is very dark in color, 12-15 per cent acid; it is sold on a basis of 3 per cent M.I.U.

FOOTS, by-products of vegetable oil refining have become increasingly important as additional raw materials for soap manufacture. Of these foots, the cottonseed product is of the greatest importance. Cottonseed oil itself, formerly a waste product in the cotton industry, today is our leading edible fat, and is not used in the soap kettle.

Cottonseed foots, or cotton soap stock, is produced in the refining process, since crude cottonseed oil has a very dark, reddish-brown color, and contains fatty acids which must be removed. The refining process is carried out with small amounts of weak caustic soda lye. The lye combines with the free fatty acids of the oil, and the soap formed sinks to the bottom of the refining vessel, mechanically carrying down with it much of the coloring matter of the crude oil. The soap stock is recovered from this mass by boiling it with water and graining out the soap with salt, repeating the process several times if necessary. This soap stock contains the free fatty acids from the oil in the form of soap, and a certain amount of neutral oil which is occluded in the mass. The soap stock is sold on a 50 per cent total fatty acid basis. It can be used for soap manufacture as is, going chiefly into soap

powders, and other lower priced soap products. The soap stock may be treated with mineral acid and sold as "acidulated soap stock" or as "black grease" on a 95 per cent total fatty acid basis.

Other vegetable oil foots, derived from coconut oil, palm kernel oil, peanut oil, and corn oil, are obtained from the refining of these oils with caustic soda lye in a similar manner to that employed in the case of cottonseed oil, and sold in about the same way.

When the manufacture of stearine for use in candles began, the liquid by-product, oleic acid, found its place in the sun as a soapmaking raw material. This crude oleic acid was for a long time the only fatty acid used in soap manufacture. When it was discovered that glycerin could be recovered from soap lyes, soapmakers became painfully aware of the tremendous waste of glycerin that was being permitted in soap works, and having the already-tried use, in soap manufacture, of the crude oleic acid from stearine manufacture to encourage them in their proposed endeavor, they began the hydrolysis of neutral fats to obtain a richer glycerin than that which they recovered from their soap kettles plus free fatty acids which they might subsequently use in the manufacture of soap.

There are three main processes of fat splitting in commercial use today:—the autoclave or pressure process, the fermentation process, and the Twitchell process. The autoclave process consists in the application of pressure with the addition of some base such as lime, which assists in the hydrolysis of the fat, and enables a lighter-colored product to be obtained than might be produced simply with the application of pressure. In place of lime, sometimes sulfuric acid is used to break up the fat. Autoclaved fatty acids are not highly in favor because of their darkly-colored nature, as compared to other types of fatty acids. By distillation, however, the color of the fatty acids is materially improved.

The ferment process produces fine fatty acids of good color, and is by far to be preferred to the autoclave method. This process is based on the action of a lipolytic agent, which is prepared by grinding up decorticated castor seeds with water, and filtering to obtain a white creamy liquor. This is allowed to ferment spontaneously, water separates from it, and a thick creamy emulsion which consists of castor oil fatty acids, water, and albuminoid substances rises to the top. Manganese sulfate behaves as a "part activator" and is added to the emulsion. It is claimed that the best results are obtained when this process is carried out in a neutral medium, and therefore, it is held to be advantageous to remove the free acid present in low grade fats by washing with soda.

The Twitchell process has been one of the most important developments in the soap industry in recent years. It consists in the application of steam and a catalyst or saponifier, which is a fatty aromatic sulfonic acid, (Turn to Page 64)



New Products

A new shaving soap item by Allen B. Wisley Company of Chicago,—the wooden shaving bowl containing lavender scented soap. The bowl finish is natural wood. The box in tan imitation wood grain finish. An attractive gift item.



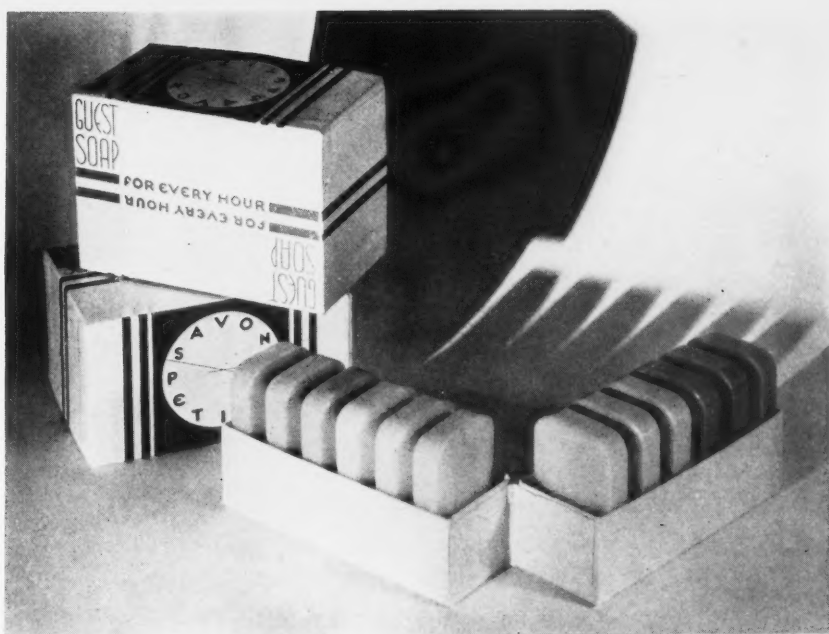
A container for floor wax lifted out of the ordinary. Lithographed in contrasting black and yellow. Ultragloss is manufactured by the Ultra Chemical Company of Paterson, N. J. The container is by National Can Company.



The Lorie line of toilet soaps of the United Drug Company of Boston appears in new shape and package. The box is in green and the soap in salmon pink, producing a very striking contrast.

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The Petite Savon soap of the Hewitt Soap Company of Dayton appears in a larger cake and new type box with two sections joined by a hinge, making a very attractive arrangement. Formerly packed in one-ounce cakes twelve in a box flat.

Here is a collapsible tube without a cap. The tube is equipped with the new "No-Kap" closure and is manufactured by the No-Kap Closures, Inc., of Providence. Cream by Vaniva Products Company of New York.

Old London Lavender toilet soap makes its bow on the American market. Made at Warrington, England, by the Erasmic Company, Ltd. Imported by Miramar Trading Corp., a subsidiary of Conti. This is the toilet soap which will be supplied aboard the new White Star-Cunarder "Queen Mary", the new super-liner.





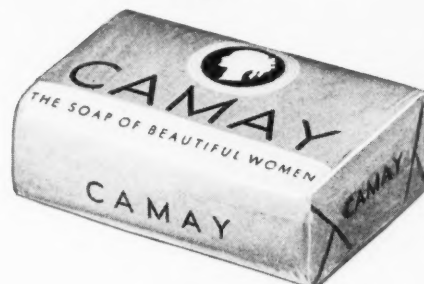
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Far from slowing up during the late depression, our designers were more active than ever—in devising new types of machines for lowering costs and producing new and outstanding types of wrapping.

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NEW AROMATIC FIRM RENAMED

The new aromatic manufacturing concern organized last month under the name, American Aromatics, Inc., has decided on a change in its corporate title, and will



M. Lemmermeyer

be called instead, Aromatic Products, Inc. New York headquarters were opened late last month at 15 East 30th St., the phone number being Murray Hill 4-3432. The plant is located in Stamford, Conn. Michael Lemmermeyer, president of the new organization, has had 28 years' experience in the essential oil and aromatic chemical business, for the past 10 years as sales manager for Givaudan-Delawanna, Inc., New York. Arthur W. Mudge, treasurer, has been associated with the perfuming materials industry since 1919. He was the founder of Organic Products, operating a plant at Mamaroneck, N. Y., prior to organization of the new concern. Edwin T. Booth, secretary, has served as perfumer for a number of leading cosmetic manufacturers, and since 1922 has been perfumer for Givaudan-Delawanna. E. J. Cardarelli, director of research, is a graduate of the Har-



Arthur W. Mudge



Edwin T. Booth

vard chemical school and has served with such companies as Monsanto, Mallinckrodt, Calco and New York Quinine. Charles A. Swan, formerly president and general manager of Antoine Chiris Co., New York, and associated with Arthur Mudge for the past three years at Mamaroneck, will be superintendent of the Aromatic Products factory at Stamford. He served in this same capacity for Chiris for many years.

Wallace A. Bush has become associated with Schimmel & Co., New York, in a sales capacity. He is to cover western New York State and parts of the Middle West. The firm of Wallace A. Bush, Inc., has been discontinued. Mr. Bush is well known to the trade, having previously been connected with Givaudan-Delawanna, Inc., and Antoine Chiris Co.

SEEK TO ENJOIN COCONUT TAX

Homer Banta, president of the Iowa Soap Co., Burlington, Iowa, has applied for an injunction against the Collector of Internal Revenue at Des Moines, Iowa, petitioning the U. S. Court for the Southern District of Iowa to enjoin the Revenue Department from collecting the three-cent excise tax on coconut oil and palm oil used by the Iowa Soap Co. The coconut oil tax is held unconstitutional because the money is collected for remission to other persons than the Government of the United States. The palm oil tax is held unconstitutional because it discriminates against the soap industry and in favor of the tinplate industry. Hearings are being held at Des Moines during the current week of Nov. 11.

Frederick J. Pope, publisher of *Toilet Requisites* and widely known in the cosmetic and soap industry for many years died suddenly Nov. 11 of a heart attack at the age of 63.

P & G DESIGNING DUST-PROOF PLANT

When construction is completed on the new dust-proof flake and powder department at the Ivorydale plant of Procter & Gamble Co. the company will have there the most modern and efficient department of its kind in the country. The construction will effect the combination of the present four packing rooms into one large room, one hundred and fifty feet square, and will group the flake-making equipment on two floors directly under the packing room. In the planning of the new department a dominant factor was the elimination of dust and the general improvement of working conditions. With this end in mind, the soap-driers are to be made dust-tight, and special filling machines are being designed in the Ivorydale machine shops to eliminate the threat of dust at this point. A newly developed dust-tight automatic bin is being tested under actual operating conditions in an effort to completely change the present method of handling flakes. If the experiments are successful, the new type of bin will eliminate the necessity of handling flakes by hand. In addition to the steps being taken to relieve the dust problem, the escape of heat from driers is also being fought.

OIL TRADERS HEAR GEN. BUTLER

The annual banquet of the Oil Trades Association of New York was held October 22nd, at the Waldorf-Astoria, New York, with a record attendance of over 900. A reception preceded the dinner at which Rudolph G. Sonneborn, of L. Sonneborn Sons, Inc., New York, president of the association, introduced Gen. Smedley Butler, the speaker of the evening. Albert J. Squier, chairman of the entertainment committee, supervised a program of ten excellent acts which was put on following the dinner. Clifford T. Weihman, of Smith-Weihman Co., New York, president of the association for the past three years, acted as chairman of the reception committee.

STEVENSON NEW GIVAUDAN SALESMANAGER

R. M. Stevenson, in charge of sales for Givaudan-Delawanna, Inc., in the Detroit area for the past ten years, has just been made general salesmanager of the company and transferred to the New York headquarters. Mr. Stevenson, besides his long experience with the Givaudan organization, has also served with other companies in allied lines. He was with Parke, Davis & Co. in Detroit for about ten years and subsequently came to New York where he was connected with Alfred Joensson Co. in the importation of essential oils and other products. It was after this that he went to Detroit with Givaudan from where he is now returning to take his new position.



NO TEA FOR SOAPERS, SAYS HUBER

The recently installed innovation in the form of an old English tea house in the reception hall of McCormick & Co., Baltimore, where visitors are served a dish of tea while they wait to see the person upon whom they have called, or while they discuss business, brought some interesting comments from Anthony Huber, head of the Huber Machine Works, Brooklyn, whose memories of the soap industry date back close to half a century. The photo and description of the McCormick tea house, which has stirred up interest all over the country, appeared in the October issue of SOAP where it was seen by Mr. Huber. Hence his comments.

"They didn't serve tea in the old days at the big soap factories," said Mr. Huber. "No, sir. Why, I remember a soap factory of no mean proportions right in McCormick's own city where all callers received not tea—but something decidedly more exhilarating. As callers came in frequently more or less all day, exhilarating greetings were more satisfying to the personnel of that concern than they could possibly be to the host at McCormick's. One or two cups of tea a day is enough, but the exhilarating stuff—well, that's another story. It was an odd experience to get to this soap plant at ten in the morning or four in the afternoon. The plant would recess for thirty minutes while everybody drank some "lunch"—and this meant the factory hands as well. Who can say the "Gay Nineties" had no advantages over the grind in the modern soap plants?"

The Foragers will hold a beefsteak dinner at Cavanagh's, 258 West 23rd St., New York, the evening of November 16th.

Joseph F. Hinds, chairman of the executive committee of Maryland Glass Corp., Baltimore, died, October 29th.

Chicago Trade Notes

MAJOR JOHN L. GRIFFITH, commissioner of Big Ten Athletics and president of the National Coaches and Athletic Association, was the principal speaker at a meeting of the Chicago Drug and Chemical Association, October 31st, at the Chicago Athletic Association. Major Griffith's talk on "Collegiate Athletics and Socialist Trends in American Universities" was thoroughly enjoyed by the 65 members present. All plans for the annual Christmas banquet, which is to be held at the Stevens Hotel, December 19th, have been completed and will be announced shortly.

C. A. Hammond and M. B. Vance, co-chairmen of the entertainment committee of the Chicago Perfumery, Soap and Extract Association, announce that plans for the annual Christmas party to be held at the Knickerbocker Hotel, December 12th, are all completed. Through the efforts of J. H. Helfrich, president of the association and a personal friend of Harold A. Safford, program director for radio station WLS, an unusual program of entertainment has been arranged. Mr. Safford will preside as master of ceremonies and will introduce many of the featured stars from the radio station. Among these are the Hoosier Hot Shots, Winnie, Lou and Sally, Cousin Chester and a team of tap and acrobatic dancers. Tom Owens and his WLS Corn Huskers will provide the music.

George E. Lum, father of Dudley F. Lum, Chicago manager for Givaudan-Delawanna, died October 22nd at Chatham, N. J.

The Fall Bowling Tournament of the Chicago Perfumery, Soap and Extract Association is scheduled for the evening of November 20th at the Hamilton Club. There will be ten prizes and since it is a handicap affair everyone will have a chance at a prize.

Every member of the Affiliated Sanitary Supply Distributors of Chicago was represented at the October 8th meeting. This was the first meeting at which the members reported their percentage of gain or loss in business in comparison to last year. The largest gain for the month of September was 50 per cent while that for the first nine months of the year was 43 per cent. The average gain for all companies in the month of September was 16 per cent and the average gain for the first nine months of the year was 14 per cent. These figures give the members an opportunity to see how their businesses compare with others in the same line and consequently it is expected that the averages will be watched carefully from month to month.

Billy B. Van, president of Pine Tree Products Company and a well known figure in the soap industry, was

the featured speaker at the luncheon meeting of the Chicago Federated Advertising Club on November 6 at the Chicago club rooms. The subject for his speech was, "Coordinated Advertising or Wrap It Up and Put It in the Bag."

Ken R. Dyke, general advertising manager of Colgate-Palmolive-Peet Company was one of the speakers at the 21st annual meeting of the Audit Bureau of Circulation held in Chicago, October 17th and 18th. Mr. Dyke emphasized the confidence of advertisers in the A. B. C. and went on to say that of all the organizations in advertising, the one which advertisers and advertising could least spare is the A. B. C.

Trojan Products and Manufacturing Company, Chicago is now manufacturing a complete line of type cleaners for the removal of ink from forms, rollers, plates etchings, etc. The firm is also introducing a line of powdered mechanics' hand soap.

The special coroner's jury of expert engineers and chemists impaneled to investigate the \$500,000 explosion which last month destroyed the Chicago soya bean plant of the Glidden Company and killed eleven persons returned an indeterminate verdict. It is thought probable that the cause of the blast will never be known.

EXEMPT SOAPS IN N. Y. DRUG LAW

Action on the New York City proposal to register and tax all cosmetics, proprietaries and patent medicines sold in the city was suspended at least temporarily at a meeting of the New York City Board of Health, October 14th, at which it was agreed to adjourn the formal public hearing, on the proposal until December 2nd. The proposed measure, from the provisions of which *unmedicated* soaps are specifically exempted, would require registration of all cosmetic or proprietary products sold in the city at an initial fee of \$25 per year, with an annual renewal fee of \$10. Other provisions are designed to prohibit false advertising and labeling. The measure would operate as an amendment to the New York City sanitary code. The decision to put off the hearing followed requests made by various groups which would be affected for more time in which to study the measure. Mark Eisner, counsel for the Toilet Goods Association, proposed postponement of the hearing, pointing out that in many respects it was a measure which might involve nation-wide implications.

In reporting removal of Colloidal Laboratories of America, Inc., to 30 Rockefeller Plaza, New York, in a recent issue, we referred to the company as manufacturers of cleansers. This was in error, the company's actual products being various of the heavier metals in colloidal suspension. The company reports that it is now negotiating with several of the world's leading soap manufacturers, who are desirous of including colloids in their soaps.

SOAP MAKERS EXHIBIT AT DRUG SHOW

The Annual Drug Trade Exposition was held at the Grand Central Palace, New York, Oct. 16, 17, and 18th, occupying the entire fourth floor. Ed. Farkash, of the John T. Stanley Sales Co., New York, acted as chairman of the exposition. There were exhibits of many drug items and accessories, and soap manufacturers too saw that their products were well represented. Special emphasis was placed on new products. Among the exhibitors were the following:

Barcelona Sales Co., New York, Boris Biele, president, in charge, was featuring its complete line of castile soaps, shampoos, olive oils, and an antiseptic baby oil. A new coco-castile soap of domestic manufacture is just being introduced under the name "Madrina." Mr. Biele was formerly with McKesson & Robbins, Inc., having resigned to become president of Barcelona Sales Co. early this year.

The Hennafoam Corp., New York, and E. Griffiths Hughes, Inc., Rochester, N. Y. Mr. Neufeld in charge, were exhibiting their line of "Hennafoam" shampoos and "Radox" bath salts respectively.

Conti Products Corp. and its subsidiary Miramar Trading Corp., New York, with N. Rosensweet and A. J. Cunningham in charge, were exhibiting their line of soaps and shampoos. Conti Products Corp. featured its liquid shaving soap while Miramar Trading Corp. featured "Erasmic Old London Lavender" toilet soap, which is just being introduced in United States. This soap will be used exclusively on the new Cunard White Star Liner "Queen Mary" which will make its maiden voyage to New York next spring.

Merz-Mihn, Inc., New York. Mr. Wall in charge of the booth, was displaying "Admiracion" pine tar shampoo.

B. S. Colnes, New York, was exhibiting "Laco" castile shampoo, for all olive oil products, and "Laco" pure olive oil castile soap.

John T. Stanley Co., New York. Ed. Farkash in charge of the booth, was displaying its line of castile soaps, shaving soap, shampoo and a new shaving bowl and lotion package.

Odora Co., New York. Spector in charge of booth, was exhibiting its line of moth preventatives, featuring "Odora" crystals and cakes, also "Mothex" liquid spray.

Cosmos Chemical Corp., New York, Miss Sandra Cate and Dr. J. Dalbey in charge of booth, showed its odorless deodorant "Sanovan". This product has just recently been offered to the retail trade, having heretofore been sold only to bulk buyers.

The Detroit office of Hunnewell Soap Co. has been moved from 3432 Harding Ave. to 547 Cass St.

More sodium silicate can be taken up by a soap if the soap contains large amounts of coconut and palm-kernel oils. C. Stiepel. *Allgem. Oel- u. Fett-Ztg.* 32, 157-9 (1935).

SOAP PERFUME SPECIALS *by* SOAP PERFUME SPECIALISTS

Will 60 or 75 cents perfume 100 pounds of toilet soap? It will, *if* your perfume has been *pecially* made by perfumers who have made a lifetime study of soap.

We have built up an entire department along those lines and invite your inquiries.

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PERSONAL AND IMPERSONAL

J. A. Nelson has been appointed sales manager of Bon Ami Company, New York. He has been credit manager and is succeeded in this position by his assistant, E. O. Regelman.

R. T. Kline has joined the Beach Soap Company, Lawrence, Mass. as sales representative. He is located in Syracuse, N. Y. Mr. Kline has been connected with the soap industry for many years having previously been sales manager for Beaver-Remmers-Graham Co., Dayton, Ohio, and J. T. Robertson Co., Syracuse, N. Y.

Soap Products, Ltd., Long Island City has filed a petition in bankruptcy with liabilities of approximately \$137,000.

Viscount Leverhulme, Governor of Lever Bros., Ltd., Port Sunlight, England, opened the annual British Business Efficiency Exhibition in London late in October. Viscount Leverhulme, who is a keen believer in the use of up-to-date business equipment, tried out a number of modern devices during his tour of the exhibition.

Felipe Lahoud, representative of the firm of John Lahoud, Caracas, Venezuela, is in the United States for a visit of several months during which time he expects to arrange for the purchase of machinery, raw materials and finished products required by his concern in a program of expansion on which they are embarking. They now manufacture soap and supply their products in this line to a large percentage of the Venezuelan trade. They plan to expand their line to include, tooth paste, shaving cream, face powder and various other toiletries. They are also planning on establishing a new plant in Colombia and will shortly start production and sale of their products in that country.

F. W. Fitch Co., Des Moines, is currently featuring a special offer to the barber trade on its new shaving mug in combination with "Fitch's" shaving cream. The mug, ordinarily priced at \$1.50, and three pounds of cream, sold ordinarily at 50c per pound, are being offered in combination for \$2.00.

Sale of Colgate-Palmolive-Peet products in the pre-holiday trade will be stimulated by offering Christmas prizes to retail drug dealers and clerks who sell specified amounts of the various Colgate products. The prizes are not to be awarded on a contest basis, but will go to all dealers and clerks who reach a certain sales figure.

Manhattan Soap Company, New York, manufacturer of "Sweetheart" soap, has taken 42 time announcements weekly over the NBC station WEAJ to supplement spot broadcasting activities in other sections.

Procter & Gamble Co. is opening a new contest for children, designed to boost sale of "P & G White Naphtha" soap. Half-page color advertisements in Sunday comic sections of newspapers from coast to coast, and full-page advertisements in teachers' magazines will announce the "Pirate Color Book" contest. Every entry calls for the purchase of six cakes of P and G White Naphtha.

Gold Dust Corporation has announced details of a profit sharing plan for executives and employees. Under the plan, there will be set aside each year from June 30, 1936, to June 30, 1940, inclusive, from consolidated profits, in excess of dividend requirements on the preferred and \$1 a share on common, 20 per cent up to \$1,000,000 and 10 per cent of the excess from \$1,000,000 to \$2,000,000 as extra compensation to officials. The president, with the approval of the board chairman, will designate the officers who will participate and the amount of bonus.

The price of "Palmolive" soap was advanced 50c per gross on November 1, bringing the current figure up to \$6.60 per gross. Company officials state that the advance was made to keep selling prices in their correct relation to raw material costs which have shown a substantial advance over recent months.

Edwin Reese has recently been named safety director of Procter & Gamble Co., having previously been foreman of the general utility department. He replaces C. J. Fahnle who has been promoted to the position of employees' service supervisor.

The soap factory of the Illinois State Penitentiary at Stateville, Ill., was damaged by fire to the extent of about \$3,000, in a recent blaze which resulted from an acetylene blow torch coming into contact with a vat containing chemicals. None of the convicts were injured and the fire was quickly brought under control.

Bristol-Myers Co. has recently made a change in its advertising representatives from Benton & Bowles to Young & Rubicam. The campaign includes the Bristol-Myers radio broadcast featuring "Ipana" tooth paste and "Sal-Hepatica."

WARNER

Quality

PIONEERED FOR NEARLY 50 YEARS

CAUSTIC SODA
HIGHEST GRADE
(ELECTROLYTIC)
IN EITHER
FLAKE, SOLID OR LIQUID FORM

**CARBON
TETRACHLORIDE**
REDISTILLED WATER-WHITE
SUPPLIED ALSO IN COMBINATION WITH
OTHER SOLVENTS TO MEET
INDIVIDUAL REQUIREMENTS

EARLIEST PRODUCTION IN THIS COUNTRY
**TRI-SODIUM
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FIRST PRODUCER OF A FREE-FLOWING
AND NON-CAKING PRODUCT NATION-
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QUALITY

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DIVISION OF WESTVACO CHLORINE PRODUCTS.

Lucien Ste. Marie, 22-year-old soap frame washer in the plant of J. Barsalou & Cie., Montreal, Canada, met death by scalding when he fell into a large tank containing boiling water and caustic in the basement of the factory last month. At the coroner's inquest it was recommended that the company construct a railing around the tank which is level with the floor.

♦

C. R. Vint, vice-president and general manager of Colgate-Palmolive-Peet Co. of Canada, Ltd., announced recently that employment in their organization is at the highest point in its history. The company is now employing more people than it did in the peak years of 1929 and over 31 per cent more than in 1933. During the past summer the five-day week plan was inaugurated, for their office force and this plan was so successful that it has been decided to operate on a five-day week permanently. Another recent development is the installation of a complete system of air-conditioning in the offices of their modern Toronto plant.

♦

S. A. Smith & Co., soap and soap products, have moved from 92 Warren St. to 415 Greenwich St., New York City.

♦

"Tubby" Soap, manufactured by Gulf and Valley Cotton Oil Co., New Orleans, is being introduced to the retail trade in Atlanta, with six cakes selling for 25c.

♦

John D. Lee, Sr., head of J. D. Lee Soap Co., Denver, died October 14. He was seventy-eight years old, and a native of Sarnia, Ontario. He is survived by five sons.

♦

Vincent Maggiore of Canton, Ohio, has been directed by the Federal Trade Commission to cease imitating the packages, labels and brand names of the Climalene Co. of Canton, and from use, in connection with the sale and advertising of a cleanser and water softener, of the name "Amo-Lime." Maggiore is also ordered to cease and desist from marketing a cleanser and water softener in packages or containers deceptively similar in color or design to the packages of any competitor.

♦

John N. Dallon, long a well known figure in brokerage circles of the New York vegetable and fish oil trades, was killed October 29 in a fall from the seventeenth floor of the Whitehall Building, New York. Mr. Dallon, who was forty years old, had recently opened brokerage offices in the Whitehall Building under his own name. He had previously been connected with Wilbur-Ellis Co., Pacific Coast oil concern, as manager of their New York office for a number of years. Prior to that time he was at one time with Balfour, Williamson & Co., and later with Brown-Edwards Co., New York. Mr. Dallon was a veteran of the World War, having served overseas with the 27th Division. He is survived by his wife, Mrs. Emilie Dallon, and two children.

E. J. MILLS HEADS AMERICAN PRODUCTS

At the recent annual meeting of the board of directors of American Products Company, Cincinnati, E. J. Mills, who has been associated with the company in an executive capacity for the past 25



years, was elevated to the presidency. Albert Mills, founder and president of the company from its inception, was elected chairman of the board. C. M. Mills continues as treasurer. Other officials are R. L. Flett, vice-president and director of manufacturing operations; J. P. Decker, secretary and comptroller; and R. L. Lippert, assistant secretary and director of sales

promotion. The American Products Company, manufacturers of the nationally known line of "ZANOL" household products and one of the largest direct selling companies in the world, has been in business for 28 years. Its line includes 250 products which are distributed direct to the home through authorized dealers in every section of the country.

♦

OWENS-ILLINOIS APPOINTS RAIRDON

Owens-Illinois Glass Company, Toledo, has just appointed Smith L. Rairdon as eastern sales manager with headquarters at the company's branch office in New York City. Mr. Rairdon has for some years been manager of the company's pharmaceutical and proprietary division, and when he took over his new duties in New York, October 15th, it was announced that he would continue to act in an advisory capacity in relation to this division's liquor ware operations. Mr. Rairdon's transfer to the east is in recognition of the increasing importance of Owens-Illinois business in that region and in anticipation of still further enlargement of the company's business there. It will be something in the way of a homecoming also, for Smith was stationed in New York previously for several years and has many friends there.

♦

Unethical advertising practices in the sale of a cleansing compound called "Foamol" will be discontinued by A. F. Walke, of Cincinnati, trading as Keelow Laboratories. Under a stipulation entered into with the Federal Trade Commission, Walke agrees to stop asserting that "Foamol" will "clean without work" and that "any and all soils will disappear instantly" when "Foamol" is used. He will also stop asserting that this product "will leave worn articles as fresh and full of wear-resisting vitality as when brand new."

♦

Two-Laq Chemical Co., formerly at 338 Flushing Ave., Brooklyn, has moved to 25-29 N. Portland Ave. The concern manufactures cleansers and allied products.

RECORD OF TRADE-MARKS

The following trade-marks were published in the October issues of the *Official Gazette* of the United States Patent Office in compliance with Section 6 of the Act of September 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of publication. As provided by Section 14, fee of ten dollars must accompany each notice of opposition.

TRADE MARKS FILED

IT-DOES-IT—This in solid letters describing dog soap. Filed by The Woodbury Hospital and Boarding Kennels, Portsmouth, N. H., Nov. 2, 1934. Claims use since Feb. 28, 1934.

PARK AVENUE—This in reverse plate on wrapper describing soaps and shaving cream. Filed by Sheffield Company, doing business as K-T-S Products, New York, March 20, 1935. Claims use since March 15, 1935.

MILITARY—This in solid outline letters describing shaving cream. Filed by The Sheffield Company, doing business as K-T-S Products Co., New York, Apr. 20, 1935. Claims use since Apr. 6, 1935.

SERVISHINE—This in solid letters describing glass, metal and porcelain cleaner. Filed by Phillips Petroleum Co., Bartlesville, Okla., May 11, 1935. Claims use since April 6, 1905.

GETZIT—This in solid letters describing cleaning powder. Filed by Atlas Chemical Co., Jersey City, N. J., July 30, 1935. Claims use since Jan. 16, 1932.

ARTJAY—This in solid letters, arranged in semi-circle over divan, describing cleaning preparation. Filed by Artjay Products Company, Scranton, Pa., Aug. 16, 1935. Claims use since June 1, 1935.

PHE-MER-NITE—This in solid letters describing antiseptic. Filed by S. E. Massengill Co., Bristol, Tenn., June 28, 1935. Claims use since May 14, 1935.

TRIAD—This in solid letters describing insecticide. Filed by Hammond Paint & Chemical Co., Beacon, N. Y., July 23, 1935. Claims use since Dec. 1, 1933.

NOXLARVA—This in solid letters describing insecticide. Filed by Noxlarva Company, Santa Monica, Calif., July 29, 1935. Claims use since June 1, 1934.

Mark consisting of circle and triangle on rectangle, describing deodorants, disinfectants, cleaning compounds, etc. Filed by Creco Co., Inc., Long Island City, N. Y., Nov. 23, 1932. Claims use since August, 1932.

SIDOL—This in solid letters on circular reverse plate describing polish. Filed by Siegel & Co., Koln-Braunsfeld, Germany, Aug. 10, 1935. Claims use since January, 1903.

GEMS—This in outline letters on reverse plate across top of package describing cleaning compound. Filed by

Gem Products Sales Co., Camden, N. J., Aug. 14, 1935. Claims use since July 12, 1935.

TRUMP—This in solid letters describing fly spray. Filed by Wesco Foods Co., July 25, 1935. Claims use since Mar. 1, 1934.

FIRESTONE—This in solid letters describing paint. Filed by Firestone Tire and Rubber Co., Akron, Ohio, Mar. 21, 1935. Claims use since Aug. 27, 1926, and Jan. 29, 1932.

DART—This in solid letters with arrow pointing to circle describing auto polish and cleaner. Filed by S. H. Kress & Co., New York, June 26, 1935. Claims use since January, 1935.

MORTON'S EX-MAR—This in solid letters describing auto and furniture polish. Filed by Morton Products, Bronx, N. Y., Aug. 7, 1935. Claims use since July 29, 1935.

MORTON'S KOTEM—This in solid letters describing floor wax. Filed by Morton Products, Bronx, N. Y., Aug. 7, 1935. Claims use since July 29, 1935.

TEL-HY No. 19—This in solid letters describing antiseptic cleaner. Filed by Hygiene Company, New York, Aug. 5, 1935. Claims use since Aug. 1, 1935.

CINQUARSEN—This in solid letters describing antiseptic. Filed by Norma-Lite Co., Des Moines, Iowa, Aug. 10, 1935. Claims use since Apr. 10, 1934.

FIRESTONE—This in solid letters describing auto cleaner, etc., and auto top dressing. Filed by Firestone Tire & Rubber Co., Akron, Ohio, July 10, 1935. Claims use since Aug. 27, 1926, on top dressing and Oct. 18, 1932, on cleaner.

IVANHOE—This in solid letters describing shaving cream. Filed by Ford Hopkins Company, Chicago, Aug. 17, 1935. Claims use since May, 1935.

ROBERTA—This in solid script diagonally over woman's head describing soap. Filed by J. T. Robertson Co., Inc., Syracuse, N. Y., Aug. 17, 1935. Claims use since Nov. 21, 1933.

WHITE CHIEF—This in solid letters describing shoe cleaner. Filed by The House of Fayrin, Louisville, Ky., Aug. 31, 1935. Claims use since July 12, 1935.

KLEEN-RITE—This in solid letters diagonally across square describing washing compound. Filed by Kleen-Rite Products Co., New York, Aug. 27, 1934. Claims use since Aug. 22, 1934.

GOOD HUMOR—This in solid letters, describing dentifrices. Filed by Good Humor Corp. of America, Brooklyn, Aug. 10, 1935. Claims use since July, 1935.

Smi-Ho—This in solid letters describing dry cleaner. Filed by Smi-Ho Products Co., Denver, June 17, 1935. Claims use since Mar. 14, 1934.

Dog's head in circle describing flea powder and dog soap. Filed by Polk Miller Products Corp., Richmond, Va., Aug. 23, 1935. Claims use since April, 1935.

MER-KIL—This in solid letters across circle describing disinfectant. Filed by Mer-Kil Products Co., Aug. 26, 1935. Claims use since June 1, 1935.

SERGEANT'S—This in solid and outline letters on carton carrying picture of man and dog's head, describing soap. Filed by Polk Miller Products Corp., Aug. 23, 1935. Claims use since April, 1935.

PICKWICK—This in light letters on solid plate describing furniture polish. Filed by Oscar Eisenstein, Brooklyn, June 27, 1935. Claims use since April, 1935.

ROXOR—This in solid letters describing insecticides. Filed by The Roxor Corporation, Nashville, Tenn., July 3, 1935. Claims use since May 17, 1932.

SURE-KLEAN—This in solid letters describing cleaner. Filed by Uddo Taormina Corporation, New Orleans, and Los Angeles, Aug. 7, 1935. Claims use since 1930.

KLEEN-LIN—This in solid letters describing cleanser. Filed by Great Atlantic & Pacific Tea Co., New York, Aug. 17, 1935. Claims use since June 13, 1929.

TRYON—This in solid letters with the word shave in outline letters describing shaving cream. Filed by Tyron, Inc., Danbury, Conn., July 1, 1935. Claims use since Jan. 15, 1935.

WHITE ACE—This in solid letters describing shoe cleaner. Filed by Old Dutch Industrial Products Co., Kearney, N. J., Aug. 21, 1935. Claims use since July, 1932.

SHAVETTES—This in solid letters describing shaving granules. Filed by Livingston Co., West Hartford, Conn., Sept. 11, 1935. Claims use since May 24, 1935.

WHITE KNIGHT—This in solid letters together with representation of knight in uniform describing soap. Filed by Kerk Guild, Inc., Utica, N. Y., Sept. 12, 1935. Claims use since June 26, 1935.

CRIBOUT—This in solid script describing soap. Filed by John Wanamaker, Philadelphia, Sept. 17, 1935. Claims use since Sept. 5, 1935.

TRADE MARKS GRANTED

328,782. Cleaning Preparation. Mystic Foam Co., Cleveland. Filed May 3, 1934. Serial No. 350,873. Published July 2, 1935. Class 4.

328,864. Glove Laundry Soap. Buscarlet Glove Company, New York. Filed April 10, 1935. Serial No. 363,579. Published July 30, 1935. Class 4.

328,866. Shampoo. Nixon Products Company, Omaha. Filed April 11, 1935. Serial No. 363,636. Published July 30, 1935. Class 6.

328,920. Soap, Soap Substitutes, and Combinations Thereof. Emulsol Corporation, Chicago. Filed June 2, 1934. Serial No. 352,164. Published July 30, 1935. Class 4.

328,921. Shaving Cream. Sylvester L. St. John, Norwood, Mass. Filed June 2, 1934. Serial No. 352,200. Published July 30, 1935. Class 4.

329,016. Furniture Polish. Acme White Lead and Color Works, Detroit. Filed May 6, 1935. Serial No. 364,563. Published July 30, 1935. Class 16.

329,023. Polishes for Woodwork, Furniture and Floors. Colfanite Products Company, Seattle. Filed April 27, 1935. Serial No. 364,275. Published July 23, 1935. Class 16.

329,051. Cleaning Compound. A. L. Wilson Chemical Company, Jersey City. Filed January 24, 1935. Serial No. 360,948. Published August 6, 1935. Class 6.

329,062. Saponaceous Compounds, Shaving Cream, Shaving Sticks, Shaving Powder, etc. Shulton, Inc., New York. Filed May 15, 1935. Serial No. 364,973. Published August 6, 1935. Class 4.

329,076. Cleaning Preparation. Fitzpatrick Bros., Inc., Chicago. Filed May 18, 1935. Serial No. 365,073. Published August 6, 1935. Class 4.

329,114. Cleansing and Deodorant Compound, and Water Softener. Ferris Products, Chicago. Filed May 27, 1935. Serial No. 365,472. Published August 6, 1935. Class 6.

329,148. Fumigant. West Disinfecting Company, Long Island City, N. Y. Filed June 12, 1935. Serial No. 366,128. Published August 6, 1935. Class 6.

329,177. Tooth Paste, Athlete's Foot Lotion, etc. Alho Chemical Co., Philadelphia. Filed January 29, 1935. Serial No. 360,817. Published August 13, 1935. Class 6.

329,192. Deodorant. MacLean Commercial Products Company, New York. Filed May 16, 1935. Serial No. 364,996. Published August 13, 1935. Class 6.

329,202. Antiseptic Preparation. Farastan Company, Philadelphia. Filed June 1, 1935. Serial No. 365,694. Published August 6, 1935. Class 6.

329,226. Tooth Powder. Hope, Inc., New York. Filed June 22, 1935. Serial No. 366,517. Published August 13, 1935. Class 6.

329,245. Tooth Powder. Fred Lauer, Chicago. Filed April 8, 1935. Serial No. 363,508. Published August 6, 1935. Class 6.

329,257. Auto Polish. American Oil Company, Baltimore. Filed June 22, 1935. Serial No. 366,500. Published August 13, 1935. Class 16.

329,289. Flea Powder. Black Flag Company, Baltimore. Filed May 28, 1935. Serial No. 365,506. Published August 6, 1935. Class 6.

DRY CLEANING SOAPS

Coming in an early issue of SOAP,—an authoritative discussion of dry cleaning soaps,—their characteristics, manufacture, uses, and peculiarities. Also a study of chlorinated solvents and their relation to the shortcomings of modern dry cleaning soaps. Watch for these two informative articles to be published soon.



GRASELLI TRI-SODIUM PHOSPHATE

GRASELLI Tri-Sodium Phosphate is FREE FLOWING . . . because our process permits it to cure.

Non-Sifting Packages. Shipped to you in barrels with paper liner — no loss either

in transit or storage. Also comes in kegs and bags. Grades—fines, flake, globular, medium and coarse.

Let us figure on your T.S.P. requirements. If you are in a hurry, call our nearest branch.

Let us quote you on—

Silicate of Soda • Caustic Soda • Soda Ash • Carbon Tetrachloride • Paradichlorobenzene • Sodium Fluoride

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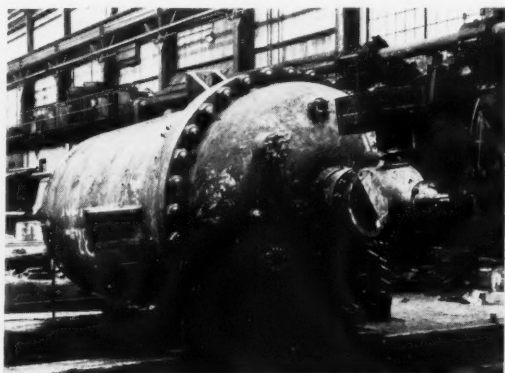
ALBANY	CHARLOTTE	DETROIT		NEW ORLEANS	ST. LOUIS	SAN FRANCISCO
BIRMINGHAM	CHICAGO	MILWAUKEE		PHILADELPHIA	ST. PAUL	584 Mission St.
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New Equipment and Bulletins

IF YOU want additional information on any of the items described below or if you want any of the bulletins, catalogs, etc., write to the MacNair-Dorland Co., Inc., 254 West 31st St., New York, mentioning the number of the item.

172. Albert H. Bruecke, New York, high pressure autoclave ready for shipment to a middle-western oil concern. These autoclaves are built for Albert H. Bruecke, 30 Rockefeller Plaza, New York, by an American manufacturer, following the plans of The Lurgi



Company, Frankfort, Germany. Dimensions, 13 feet high by 5 feet in diameter, they attain a splitting degree of 90 per cent in two hours after splitting temperature and pressure are reached.

173. Van Dyk & Co., Jersey City, N. J., has just published the results of recently concluded laboratory work under the title "New Developments in Cosmetic Raw Materials". In a preface to the report it is pointed out that cosmetic creams and emulsions should avoid alkalinity. The report then describes certain new emulsifiers, waxes, wax substitutes, etc. that have been developed with this end in view. Copies of the report are available.

174. Sherwood Petroleum Co., Brooklyn. A folder has just been printed under the title "Pyrethrum Household Insecticides". It describes Sherwood's line of products for the insecticide manufacturer, including pyrethrum flowers, powder and extract, as well as "Spraysene" their special solvent and diluent for use in insecticides. Views of the Sherwood insectary and testing chamber are included. Copies available through the publishers of SOAP.

175. Stokes & Smith Co., Philadelphia, has issued a new folder featuring the "Neverstop" carton sealer. With this automatic equipment material may be gross-weighted, net-weighted or measured by volume. Copies of the folder are available.

176. Davies-Young Soap Co., Dayton, Ohio, has issued a new catalog describing its complete line of

soaps, waxes, floor products, insecticides, disinfectants, polishes, deodorants, etc. Copies of the new catalog are being mailed to jobbers throughout the country and Davies-Young are also prepared to mail individual copies of the catalog to jobbers' salesmen where the jobber sends in the names and addresses.

177. Electric Sprayit Co., Milwaukee, is introducing a new sprayer model under the name "Sprayit Deluxe Premier". It is a completely portable automatic electric insecticide sprayer and is equipped with a permeation spray head as well as a direct contact hand spray gun. For permeation spraying the unit carries a one-gallon capacity glass jar, and the contact spraying gun is fitted to a one-quart aluminum container.

178. U. S. Bottlers Machinery Co., Chicago, has prepared a new and interesting bulletin on its automatic washing equipment for washing tin as well as glass containers. The model "AWD" washer can be supplied with three types of feeds: slide feed for hand loading of containers; unscrambler feed for handling round containers by the case; or roll feed for handling round tin containers fed from overhead storage by gravity to the washing machine. Copies of the bulletin illustrating and describing the equipment are available.

New Patents

Conducted by
Lancaster, Allwine & Rommel
Registered Attorneys

PATENT AND TRADE-MARK CAUSES
815 15th St., N. W., Washington, D. C.

Complete copies of any patents or trade-mark registration reported below may be obtained by sending 25c for each copy desired to Lancaster, Allwine and Rommel. Any inquiries relating to Patent or Trade-Mark Law will also be freely answered by these attorneys.

No. 2,013,300, Detergent Composition, Patented September 3, 1935 by Charles Dunbar, Middleton, England, assignor to Imperial Chemical Industries Limited, a corporation of Great Britain. A detergent composition for textile fibers comprising a compound selected from the group consisting of the alkali-metal salts of cetyl-sulfo-benzyl ether, cetyl-sulfo-acetate, octadecenyl-sulfoacetate and beta-sulfoethyl-oleate, and a protective colloid selected from the group consisting of glue, gelatine and isinglass.

No. 2,014,007, Fabric Cleaning Composition, Patented September 10, 1935 by Eugene C. Pailler, Boston, Mass., assignor to Silk-Eze Corporation, Boston, Mass. A fabric cleaning and dyeing composition comprising a vegetable oil soap as its principal ingredient, a soluble sulphonated

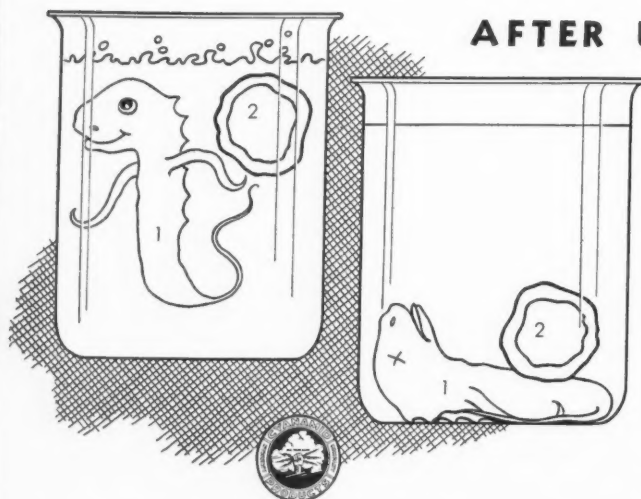
(Turn to Page 115)

BEFORE AND

Portrait of Mike^① and Molly^②

(Exaggerated several thousand times)

AFTER USING ALPHASOL OT*



1. Mike—microbe, germ, bacterium, tick, insect and others.

2. Molly—molecule, of disinfectant, insecticide, etc.

BEFORE: Mike swims happily, pursued by Molly but protected from harm by the interfacial tension existing between all solids and liquids.

AFTER: Alphasol OT has reduced the surface tension of the liquid as well as depriving Mike of his shield, allowing Molly to get in her deadly work.

MORAL: Use Alphasol OT in your disinfectant, for increased killing power. Write for details.

American Cyanamid & Chemical Corporation

30 ROCKEFELLER PLAZA, NEW YORK, N. Y.

* Registered U. S. Patent Office.

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CITRONELLOL
ACETOPHENONE

BENZYL ACETATE
BENZYL ALCOHOL
BENZOPHENONE
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For Soaps, Perfumes, Cosmetics, etc.

AMERICAN-BRITISH CHEMICAL SUPPLIES, Inc.
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NEW YORK, N. Y.

CHARLES TENNANT & CO. (CANADA) LTD.
TORONTO, CANADA

CONTRACTS AWARDED

Crystal Soap & Chemical Co., Philadelphia, was low bidder on 2,000 lbs. saddle soap for the U. S. Marine Corps, Philadelphia, in a recent bidding, their quotation being 11.4c per lb.

In a recent bid opened by the Post Office Dept., Washington, Crystal Soap & Chemical Co., was low bidder on 200 kegs, 100 lbs. ea., auto soap, and also low bidder on 40½-250 lbs. half bbls. do; at 3.98c per lb. Harley Soap Co., Philadelphia, was low bidder on 50-450 lb. bbls. do; at 3.74c per lb. Baltimore Paint & Color Works, Baltimore, was low bidders on 5,000 gals liquid floor wax, their lowest bid being 36c per gal.

In a recent bidding opened by the U. S. Marine Corps, Washington, for 600 lbs. floor wax, the lowest bidders were: Mitchell-Rand Mfg. Co., N. Y. City, 9.25c; James Good, Philadelphia, 9.7c, and Baltimore Paint and Color Works, Baltimore, 10.5c per lb.

Bids opened by the Jeffersonville, Ind. Quartermaster have been awarded as follows: 9,000 cakes (6 oz.) stove polish, Crystal Soap & Chemical Co., Philadelphia, at 5.45c pr. cake; Pennsylvania Salt Mfg. Co., Philadelphia, 46,154 cans caustic soda, (13 oz.), 4.0625c per can; Iowa Soap Co., Burlington, Iowa, 81,500 lbs. laundry soap at 3.57c per lb.; Hunnewell Soap Co., Cincinnati, 3,000 cakes grit soap at 2½c per cake; and 4,308 cans soda, caustic, went to Pennsylvania Salt Mfg. Co., for 4.6785c per can.

The Branch of Supplies, Treasury Dept., Washington, has opened bids as follows: on 1,000 lbs. shaving soap, the low bid of 17c per lb. was entered by Crystal Soap & Chemical Co. James Good was low bidder on 100 gals. disinfectant at 87.9c per gal. Low bid on 20,000 lbs. of type A scouring compound was entered by American Soap & Washoline Co., 1.12c per lb. On 30,000 lbs. of type C scouring compound, the low bidder was Keene Washing Products Co., 1.21c per lb. The low bid on 6,000 lbs. auto soap was made by Harley Soap Co., Philadelphia, at 4.43c per lb. Iowa Soap Company was low bidder on 160,000 lbs. soap chips at 7.23c per lb. Armour & Company were low bidders on 100,000 lbs. laundry soap, their offer being 3.47c per lb. Armour & Co. also bid low on 12,000 lbs. powdered soap, their figure being 9.83c per lb. and on 25,000 lbs. toilet soap at 9.99c per cake. Interboro Chemical Co., was low bidder on 80,000 lbs. soda ash at 1.26c per lb.

In a bidding recently opened by the Post Office Dept., Washington, for 9,000 lbs. floor wax, the lowest bidder

was Baltimore Paint & Color Works, 9.875c per lb. Other low bids were entered as follows: Crystal Soap & Chemical Co., 9.9c per lb., and Continental Car-Na-Var Co., 10.16c per lb.

Awards on recent bids offered by Picatinny Arsenal, N. J., have been made as follows: 1,200 gals. metal cleaner, Sinclair Refining Co., N. Y. City at 11c per gal.; Conray Products Co., N. Y. City, low bidders on 1,000 gals. acetone at 78.2c per gal. and also received contract for 2 bbls. disinfectant at \$26; Crystal Soap & Chemical Co. were awarded contract for 35 lbs. naphthaline flake, at 9c per lb.

Bids recently opened by Sam Houston, Texas, Quartermaster were given Day & Frick, Philadelphia, on 6,858 cakes grit soap at 3.13c per cake. Day & Frick, Philadelphia, on 2,364 cakes grit soap at 2.95c per. cake, and Colgate-Palmolive-Peet Co., Jersey City, on 245,000 lbs. laundry soap at 3.916c per lb.

Awards on bids recently opened by Fort Sam Houston, Texas, Quartermaster were made to Steinbert-Mass Co., Houston, Texas on 9,900 lbs. soap chips at 8.025c per lb. and for 50,000 lbs. sodium chloride, at \$.005225 per lb. Drake Petroleum Co., Chicago, was low on the bid for 7,000 gal. dry cleaning solvent, getting the contract on a bid of 7.25c per gal. Solvay Sales Corp., received contract for 11,000 lbs. laundry soda, their bid being 1.95c per lb.

ANALYZES BULK SOAP COST

Bulk tallow chip soap costs \$7.08 per hundred pounds for raw materials alone, according to the Hawkeye Bulletin for October, sent out to its trade by the Iowa Soap Co., Burlington, Iowa, under the title of "What Governs the Price of Bulk Soap?" For a hundred pound bag of tallow chips which has a soap content of 91 per cent, the company states that 88.7 pounds of prime tallow costing 7¾c per pound are required on the basis that 100 pounds of tallow makes 102.6 pounds of dry soap. Twelve pounds of caustic soda are needed for the saponification. This costs 1¾c per pound or 21c. The total material cost thus figures out \$7.08, not counting overhead, container, freight, selling costs, labor, etc.

Louis Gampert, vice-president and sales manager of the Felton Chemical Co., Brooklyn, recently completed a survey of the perfuming materials market of Northern Ohio and Michigan among the consuming industries of that area. He was accompanied by C. A. Hanley, the Felton representative in that territory.

Market Report on TALLOW, GREASES, AND OILS

(As of November 8, 1935)

NEW YORK—The trend of prices in the market for oils and fats continued to be upward this period, with soap oils making the most striking gains. Europe continued to be agitated by the war scare and the tendency abroad to hoard stocks of the basic fats continued. There was substantial foreign buying during the period just closed in various world markets, but American fat consumers showed little tendency to trade at current levels. It is believed that most buyers in the soap field have secured sufficient oil and fat stocks in recent months to take care of immediate and nearby needs and will not be under compulsion to take care of replacements at once. In view of this situation it was not surprising that there was little buying in the local market at the peak prices last period. A number of soap oils were quoted fractionally lower after the turn of the current month, apparently in an attempt on the part of sellers to attract buying interest.

COCONUT OIL

Manila tanks were quoted at 43 $\frac{3}{4}$ c per pound in the local market at the close of this period, after being as high as 5c at one point. The market was quiet, with buyers apparently well taken care of as far as current needs are concerned, and but little inclined to press matters at the higher level of prices. Copra was easier on the coast where the current quotation is 21 $\frac{1}{4}$ c per pound.

CORN OIL

A firm tone prevailed in the market for crude corn oil and quotations ranged from 93 $\frac{3}{4}$ c to 97 $\frac{3}{4}$ c per pound, an advance of about $\frac{1}{2}$ c per pound from last period. Demand was light.

GREASE

Grease was in moderate demand this period, and prices advanced steadily through the month, with house and brown grades closing at 63 $\frac{3}{4}$ to 7c per pound.

OLIVE OIL

Increasing demand for denatured olive oil resulted in an increase in price this period. At the close quotations were several cents a gallon higher, ranging from 86 to 87c per gallon. Olive oil foots, on the other hand, were quoted lower under the stimulus of competition and reduced demand. The range is now from 93 $\frac{3}{8}$ to 95 $\frac{3}{8}$ c per pound.

PALM OIL

Higher prices were quoted on palm oil this period, although there was some tendency for quotations to ease off from their highs toward the close of the period. Quotations range currently between 43 $\frac{3}{4}$ to 47 $\frac{3}{4}$ c per pound. Palm kernel oil was off fractionally from the figures quoted last month, with shipment oil now offered at 45 $\frac{3}{8}$ c per pound.

A. R. Lange, manager of the fish and fixed oils department of Swan-Finch Oil Corporation, New York, has announced the appointment of four manufacturers' agents for their fish, rapeseed, and sperm oils as follows: J. C. Ackerman, 1230 Gulf Building, Pittsburgh, for western Pennsylvania; Philip A. Houghton, Inc., 113 Lincoln St., Boston, for Massachusetts, Rhode Island, New Hampshire, Vermont and Maine; Geo. A. Rowley Co., 937 North Front St., Philadelphia, for eastern Pennsylvania, southern New Jersey and Maryland; J. Theobald, Jr., Inc., 1200 West 9th St., Cleveland, for Ohio.

SOAPERS TO MEET EARLY IN 1936

The annual meeting of the Association of American Soap & Glycerine Producers will be held in Chicago early in 1936, the date and hotel to be announced, according to a bulletin from Roscoe C. Edlund, general manager of the Association to the membership. In the bulletin, Mr. Edlund states:

"This year it again appears best to hold the Annual Meeting of Association Members early in 1936 rather than in the crowded month of December. The by-laws specify that the meeting be called for December, but in the absence of a quorum such meeting, when called, can adjourn to a later date. That is what we did last year, and many of you who were present at the postponed meeting will recall that it took place in New York in January and was attended by more than 60 members.

"To meet the above-mentioned requirements of the by-laws, kindly accept this letter as notice that the Annual Meeting is called for the Association office in New York on Thursday, December 19, at 10 A.M. At the same time, however, kindly note that quorum is *not* expected, and that therefore the meeting is expected to be postponed to a date in 1936 concerning which written notice will then be sent to you and to all other members. It is expected that the postponed Annual Meeting will be held in Chicago.

"The Annual Meeting is for the purpose of electing Directors for 1936 and for such other business as the members may bring up. To prepare nominations for Directors—such nominations to be subject to vote by the members present at the Annual Meeting—President Deupree has appointed Messrs. S. Bayard Colgate, N. S. Dahl, S. S. Fels, and I. Katz, as a Nominating Committee. The list of Directors for 1935 is enclosed, and if you or any member of the Association has suggestions which he wishes to offer for the 1936 slate, he should feel free to communicate with the Committee or with me. The term of all Directors is for one year. The Directors select the President and other officers."

Market Report on SOAP AND DISINFECTANT CHEMICALS

(As of November 8, 1935)

NEW YORK—Buyers in the market for soap and disinfectant chemicals were focussing their attention on 1936 contract prices this period. Announcements have already come out setting prices on a number of materials for next year and the appearance of other important schedules is expected momentarily. So far, the most important change is in the price of refined naphthalene which has been advanced $1\frac{3}{4}$ c per pound. Owing to the strength in crude naphthalene all through the second half of this year it has been expected that some advance in the refined product would be made, but the size of the advance has been rather startling to some buyers.

The 1936 schedule on caustic soda and soda ash is expected within the next few days, although up to the moment there is nothing official on 1936 contracts. Unofficially, however, the word has been passed along that there is little prospect of any change.

ALKALIS

Buyers and sellers alike have been awaiting the appearance of 1936 prices so that they may get the 1936 contracting season under way. The delay in setting prices has been taken in some quarters as an indication that a rise in price might be anticipated and that producers were anxious to delay the announcement so that stocks would not be drawn out too heavily on this year's contracts in anticipation of the advance. Unofficial reports of late, however, have indicated that no advance need be expected. A definite announcement should be made within the next few days, clearing up the uncertainty in the market.

COAL TAR PRODUCTS

Producers announced an advance of $1\frac{3}{4}$ c per pound in quotations on refined naphthalene for 1936 late this period. This brings the quotation on refined flakes in barrels up to a basis of $6\frac{3}{4}$ c to 7c per pound. Crude naphthalene prices have been very strong in recent months and the advance in quotations on the refined grade has been indicated for some time.

GLYCERIN

No quotable advance in glycerin prices has occurred as yet, but the market has been increasingly firm due to the war talk abroad. With the government's insistence on America maintaining neutrality, foreign shipments have been subject to close scrutiny whether going to prospective belligerents or to other buyers who might resell.

ROSIN

A further advance in rosin prices was noted this period as additional buying disclosed that only a small percentage of the stocks held are available for sale.

It is reported that at least eighty per cent of the material warehoused is held in the name of the government against crop loans, and little of this is expected to get to market until prices are enough higher to give the producers a margin over the total of loan and carrying cost.

P. & G. TAX TOTAL \$13,500,000

In his annual report to P. & G. stockholders last month, E. E. Deupree, Procter & Gamble president, called attention to the fact that the company paid federal taxes, including import duties on raw materials, totaling \$13,517,000 in the year ended June 30, 1935. This compares with \$3,800,000 in the previous year and \$2,117,000 the year before. Earnings for the three months ended September 30, 1935 were \$4,304,504.87, Mr. Deupree reported. Of this \$700,000 was set aside as an addition to the equalization fund to take care of possible decline in raw material or finished inventory values. It was announced at the meeting that the company policy of electing three workers as directors of the company would be discontinued. This was declared due to the fact that when the plan was originated it was intended to give representation to each of the three plants then existing. Now the number has increased to ten. Twelve directors were nominated, among them C. L. Huff, general sales manager of the company, the sole new one.

Colgate-Palmolive-Peet Co. will close a 13-week letter writing contest on "Octagon" laundry soap, December 1. During this period it was planned to distribute \$19,500 among users of the product and dealers and clerks selling it. Consumer letters were to be accompanied by five wrappers and were to tell why Octagon soap was preferred.

F. W. Heine, of Compagnie Duval, New York perfuming material house, has returned to his desk following a recent operation.

HARD WATER

Hard water conditions in various parts of the country have an important bearing on soap sales. The results of a study of water conditions and the resultant sales possibilities for toilet soaps, laundry soap products, and detergents and water softeners will be published in an early issue of SOAP.

"Suppliers of Raw Materials to Soap and Allied Industries for 97 Years"

IMPORTERS

DEALERS

BROKERS

OLIVE OIL (all grades) and OLIVE OIL FOOTS

Cottonseed Soap Stock

Neatsfoot Oil
Coconut Oil
Cottonseed Oil
Palm Kernel Oil
Stearic Acid
Oleo Stearine
Soya Bean Oil
Palm Kernel Oil
(English or German
Denatured)

Fatty Acids, Animal & Vegetable

Rapeseed Oil
Teaseed Oil
Castor Oil
Sesame Oil
Lard Oil
Palm Oil
Corn Oil
Peanut Oil
Grease (Animal)

Tallow
Red Oil
Scap Colors
Chlorophyll
Soda Ash
Sal Soda
Talc

Boiled-down Cottonseed Soap

Trisodium Phosphate
Caustic Potash
Carbonate Potash
Bath Powder
Modified Soda
Caustic Soda
Silicate of Soda
Meta Silicate and Metso

"CEREPS" Superfatting Neutralizing Agent

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CAUSTIC POTASH

Liquid, Flake, Solid, Walnut, Ground

BORAX

CARNAUBA WAX BORIC ACID

CHALK

JAPAN WAX STEARIC ACID

CARBONATE OF POTASH
Liquid, Calcined

MONTAN WAX OLEIC ACID

CAUSTIC SODA
Flake, Solid, Liquid

BEESWAX LANOLIN

ZINC OXIDE

LARVACIDE
(Chlorpicrin) **TALC**

Chicago

Boston

Philadelphia

Cleveland

Gloversville

INNIS, SPEIDEN & CO.

117-119 LIBERTY STREET, NEW YORK, N.Y.

Market Report on ESSENTIAL OILS AND AROMATICS

(As of November 8, 1935)

NEW YORK—Citrous oils continued to be the most prominent feature of the essential oil market this period, with Messina lemon, orange and bergamot oils all scoring substantial price advances. California lemon and orange oils were also bid up in price as users opened up all avenues to acquire additional stocks. On the down side of the market the Chinese oils, anise and cassia, continued to be the outstanding features. Lower cables continue to come in from primary markets, and local suppliers have been quick to drop spot prices.

ANISE OIL

Anise oil prices were down to a basis of 44c per pound this period, with even lower figures mentioned in some quarters. Primary sources have weakened recently, and with slackening demand, sellers in the local market have been quick to make concessions.

BERGAMOT OIL

Oil bergamot prices advanced sharply this period, bringing the inside margin of the price spread up to \$1.80. In addition to this uncertainty of the market created by the Italian hostilities, there is another disturbing factor in the report of a poor crop outlook.

CASSIA OIL

Cassia oil moved downward this period in step with anise, falling to \$1.30 per pound. Increasing competition among suppliers in the local market has developed in recent weeks as reports from China continue to point to lower prices.

LEMON OIL

Both Italian oil and the California variety were in strong demand this period, with a resultant series of price advances. Italian oil is now quoted at \$1.85, with California oil at about \$1.35.

LAVENDER OIL

Quotations on the better quality oil were advanced further this period. High test oil seems to be in strong hands, and there seems to be no prospect of prices weakening in view of the firm position taken by producers. Spike prices are also being firmly maintained.

ROSE OIL

Reports from Bulgaria indicate that an attempt may be made by growers next year to limit production in an attempt to raise the price of rose oil. A reduction in acreage seems quite probable.

Andre Firmenich of M. Naef & Co., Geneva, Switzerland, sailed for Europe, November 9th, following a visit of five weeks to the United States during which time he made his headquarters with their American principals, Ungerer & Company of New York. Accompanied by

R. C. Watson, who specializes in the sale of Naef products, in United States, Mr. Firmenich spent a good part of his visit calling on users of Naef products throughout the country.

Felton Chemical Company, Brooklyn, N. Y., has just put into operation a new chemical research laboratory. The laboratory is housed in a newly built addition to their plant, which was erected especially for the purpose. The research laboratory measures 25 ft. by 45 ft. and contains the most modern equipment for organic chemical research. Research in the laboratory will be primarily in new basic perfuming materials.

Herman T. Fritzsche, general director of Schimmel & Co., A.G., Miltitz, Germany, visited in United States last month reviewing the progress made by Schimmel & Co., New York, of which he is president. Mr. Keller, secretary and treasurer, and Mr. Fritzsche made an extensive trip through the middle west. Mr. Fritzsche sailed October 25 on the S.S. Bremen.

Philadelphia Quartz Co., Philadelphia, manufacturer of various types of sodium silicate, will exhibit a comprehensive line of these products at the coming Chemical Exposition in New York, to be held in the Grand Central Palace, December 2-7.

SHAMPOOS

(From Page 29)

ever, the test can be accelerated by maintaining the scented shampoo at a temperature of 60 to 70° C. for a period of weeks. If one compounds the perfume himself he will do well to make up each of the oils and aromatic chemicals going to make up the compound in separate portions of shampoo and age test them to determine the bad actors. Substitutions in the compound can then be made for those that have proven deficient.

To be specific, yet brief, only one example will be cited. That old standby, bergamot oil among the essential oils and the commonly used phenyl ethyl alcohol among the aromatic chemicals have been tried and found wanting in the shampoo formulae in which tested. In pine tar shampoo only one hint is indulged, a little bornyl acetate, preferably pure, although it may be of technical grade, added to the five to eight pounds of liquid pine tar per one hundred gallons will impart a refreshing note and a greater lift than either of the pine oils.

(To be concluded)

KRANICH SOAPS

LIQUID SHAMPOO BASE

Coco Oil 60%
Olive Oil 60%
Natural, Opal, Green

LIQUID SOAPS
Coconut Oil 10%-15%
20%-40% Concentrate
Colored and Perfumed

SCRUBBING SOAPS

Pine-Sassafras
Plain

LIQUID
SHAMPOOS
Coconut Oil 30%-45%
Olive Oil 30%
Castile 30%

POWDERED
SOAPS
Castile U.S.P.
Coco Castile 50-50
Pure Coconut
Pure Palm

POTASH SOAPS
Soft and Hard
U.S.P. 9th and 10th

HARD AUTO
SOAPS

Kranich Standard Soaps are manufactured and produced entirely in our own factory. All our oils and fats are processed and purified before use. All alkalies are dissolved and settled to remove impurities. All our processes are technically supervised and a chemical analysis made on all finished products to assure satisfaction to our trade.

KRANICH SOAP CO., Inc.

54-60 RICHARDS ST., BROOKLYN, N.Y.

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LIQUID CHLORINE

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In tank cars and multiple unit cars

Write for Prices

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CHLORINE . MODIFIED SODAS . CALCIUM CHLORIDE
Salt . Caustic Potash . Ammonium Bicarbonate
Causticized Ash . Para-Dichlorobenzene
Sodium Nitrite . Potassium Carbonate

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The Solvay Process Company*

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Cincinnati, Pittsburgh, Detroit, Philadelphia,
Kansas City, Houston, St. Louis, Charlotte, New York

CURRENT PRICE QUOTATIONS

(As of November 8, 1935)

Minimum Prices are for car lots and large quantities. Price range represents variation in quotations from different suppliers and for varying quantities.

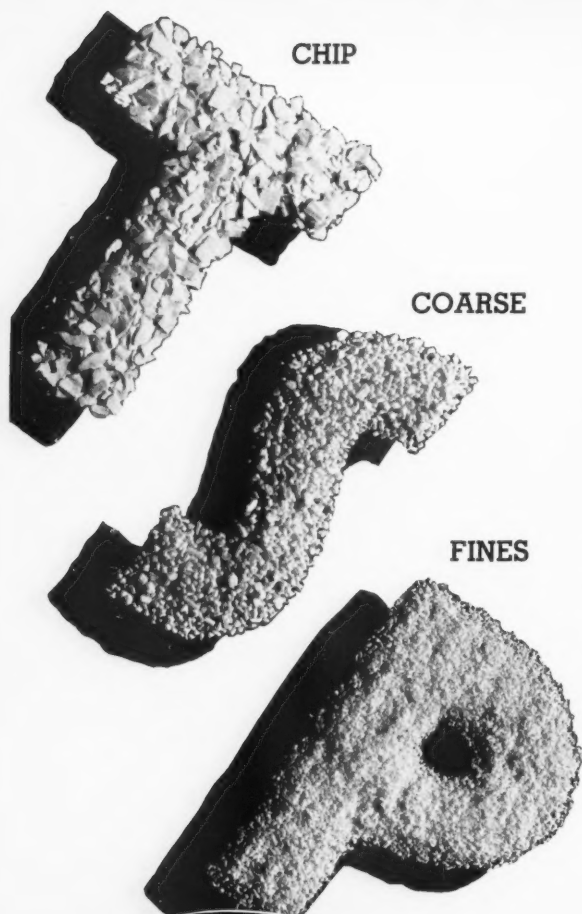
Chemicals

Acetone, C. P., drums lb.	\$.11	\$.12½
Acid, Broic, bbls., 99½% ton	95.00	100.00
Cresylic, 97½ dk., drums gal.	.43	.44
97-99%, pale, drums gal.	.46	.47
Low boiling grade gal.	.64	.65
Oxalic, bbls. lb.	.11½	.12½
Adeps Lanae, hydrous, bbls. lb.	.16	.18
Anhydrous, bbls. lb.	.17	.19
Alcohol, Ethyl, U. S. P., bbls. gal.	4.16	4.28
Complete Denat., No. 5, drums, ex. gal.	.35½	.43½
Alum. Potash lump lb.	.03½	.03¾
Ammonia Water, 26°, drums, wks. . lb.	.02½	.02¾
Ammonium Carbonate, tech., bbls. . lb.	.08	.12½
Bleaching Powder, drums 100 lb.	2.15	3.50
Borax, pd., cryst., bbls., kegs. . . . ton	50.00	55.00
Carbon Tetrachloride, car lots . . . lb.	—	.05¼
L. C. L. lb.	.07	.08½
Caustic, see Soda Caustic, Potash Caustic		
China Clay, filler ton	10.00	25.00
Cresol, U. S. P., drums lb.	.11	.11½
Cresote Oil gal.	.11½	.12½
Feldspar ton	14.00	15.00
(200 to 325 mesh)		
Formaldehyde, bbls. lb.	.06	.07
Fullers Earth ton	15.00	24.00
Glycerine, C. P., drums lb.	.14	.14½
Dynamite, drums lb.	.13¾	.14½
Saponification, drums lb.	.10¼	.11½
Soap lye, drums lb.	.09¼	.09½
Hexalin, drums lb.	—	.30
Kieselguhr, bags ton	—	35.00
Lanolin, see Adeps Lanae.		
Lime, live, bbls. per bbl.	1.70	2.20
Mercury Bichloride, kegs. lb.	.71	.76
Naphthalene, ref. flakes, bbls. . . lb.	.06¾	.07
Nitrobenzene (Myrbane) drums . . lb.	.09	.11
Paradichlorobenzene, bbls., kegs. . lb.	.16	.25
Petrolatum, bbls. (as to color) . . lb.	.02	.07¾
Phenol, (Carbolic Acid), drums . . lb.	.14¼	.16
Pine Oil, bbls. gal.	.59	.64
Potash, Caustic, drums lb.	.06¼	.06½
Flake lb.	.07	.07¾
Potassium Carbonate, solid . . . lb.	.07¼	.09½
Liquid lb.	.03½	.03¾
Pumice Stone, powder 100 lb.	3.00	4.00
Rosins (600 lb. bbls. gross for net) —		
Grade B to H, basis 280 lbs. . . bbl.	5.70	5.95
Grade K to N bbl.	6.00	6.05
Grade WG and X bbl.	6.40	7.20
Wood bbl.	4.75	5.75
Rotten Stone, pwd. bbls. lb.	.02½	.04½
Silica ton	20.00	27.00
Soap, Mottled lb.	.04¼	.04¾
Olive Castile, bars lb.	.13	.19
powder lb.	.23	.30
Olive Oil Foot lb.	.07	.07½
Powdered White, U. S. P. lb.	.19	.21
Green, U. S. P. lb.	.06½	.08
Tallow Chips lb.	.07¼	.07¾
Whale Oil, bbls. lb.	.05	.06
Soda Ash, cont., wks., bags, bbls. 100 lb.	1.23	1.50

Car lots, in bulk 100 lb.	—	\$1.05
Soda Caustic, cont., wks., sld. . . 100 lb.	—	2.60
Flake 100 lb.	—	3.00
Liquid, tanks 100 lb.	—	2.25
Soda Sal., bbls. 100 lb.	1.10	1.30
Sodium Chloride (Salt) ton	11.40	14.00
Sodium Fluoride, bbls. lb.	.07¼	.08¾
Sodium Hydrosulphite, bbls. . . . lb.	.19	.20
Sodium Silicate, 40 deg., drum . 100 lb.	.80	1.20
Drums, 52 deg. wks. 100 lb.	1.35	1.75
Tar Acid Oils, 15-25% gal.	.21	.24
Trisodium Phosphate, bags, bbls. . lb.	.03	.03½
Zinc Oxide, lead free lb.	.06	.06¼
Zinc Stearate, bbls. lb.	.20	.22

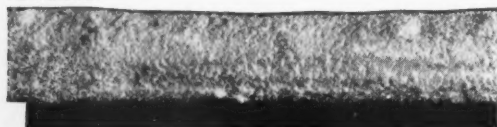
Oils — Fats — Greases

Castor, No. 1, bbls. lb.	.10¼	.11
No. 3, bbls. lb.	.09¾	.10½
Coconut		
Manila, tanks, N. Y. lb.	—	.04¾
Tanks, Pacific coast lb.	—	.04¼
Cod, Newfoundland, bbls. gal.	—	.35
Copra, bulk, coast lb.	—	.0225
Corn, tanks, mills lb.	.09¾	.09¾
Cottonseed, crude, tanks, mill . lb.	.087½	.09
PSY lb.	—	Nom.
Degras, Amer., bbls. lb.	.05¼	.06
English, bbls. lb.	.04¾	.05½
Neutral, bbls. lb.	.08	.11
Greases, choice white bbls., N. Y. . lb.	.07	.08¼
Yellow lb.	.06¾	.07
House lb.	.06¾	.07
Lard, City lb.	.14¾	.15
Compound tierces lb.	.12½	.12¾
Lard Oil,		
Extra, bbls. lb.	—	.12¼
Extra, No. 1, bbls. lb.	—	.10½
No. 2, bbls. lb.	—	.10
Linseed, raw, bbls., spot lb.	.0970	.1010
Tanks, raw lb.	—	.0910
Boiled, 5 bbls. lots lb.	—	.1090
Menhaden, Crude, tanks, Balt. . . gal.	.32½	Nom.
Oleo Oil, No. 1, bbls., N. Y. . . . lb.	—	.13¾
No. 2, bbls., N. Y. lb.	—	.12¾
Olive, denatured, bbls., N. Y. . . gal.	.86	.87
Foots, bbls., N. Y. lb.	.05¾	.09¾
Palm lb.	.04¾	.04¾
Palm Kernel, casks, denatured . lb.	.04¾	Nom.
Peanut, domestic tanks lb.	.09½	Nom.
Red Oil, distilled bbls. lb.	.095%	.105%
Saponified bbls. lb.	.095%	.105%
Tanks lb.	—	.08¾
Soya Bean, domestic tanks, N. Y. . lb.	—	.09
Stearic Acid,		
Double pressed lb.	.10	.11
Triple pressed, bgs. lb.	.12¾	.13¾
Stearine, oleo bbls. lb.	.117½	.12¼
Tallow, special, f.o.b. plant . . . lb.	—	.07¼
City, ex. loose, f.o.b. plant . . . lb.	—	.07¾
Tallow, oils, acidless, tanks, N. Y. . lb.	—	.10
Bbls., c/1 N. Y. lb.	—	.10½
Whale, refined lb.	.07¾	.08



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Sweet, cans	lb.	.58	.60
Anise, cans U. S. P.	lb.	.44	.46
Apricot, Kernel, cans	lb.	.22	.25
Bay tins	lb.	1.25	1.50
Bergamot, coppers	lb.	1.80	2.00
Artificial	lb.	1.00	1.30
Birch Tar, rect. tins	lb.	.70	.75
Crude, tins	lb.	.14	.16
Bois de Rose, Brazilian	lb.	1.25	1.60
Cayenne	lb.	2.40	2.90
Cade, cans	lb.	.26	.30
Cajuput, native, tins	lb.	.50	.60
Calamus, tins	lb.	3.25	3.50
Camphor, Sassy, drums	lb.	—	.19
White, drums	lb.	—	.20
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Rectified, tins	lb.	2.95	3.50
Caraway Seed	lb.	1.95	2.20
Cassia, Pedistilled, U. S. P.	lb.	1.30	1.40
Cedar Leaf, tins	lb.	.52	.65
Cedar Wood, light, drums	lb.	.22	.27
Citronella, Java, drums	lb.	.29	.33
Citronella, Ceylon, drums	lb.	.26	.29
Cloves, U. S. P., tins	lb.	.85	.87
Eucalyptus, Austl., U. S. P., cans	lb.	.27	.30
Fennel, U. S. P., tins	lb.	1.00	1.25
Geranium, African, cans	lb.	4.90	6.75
Bourbon, tins	lb.	5.00	6.75
Hemlock, tins	lb.	.70	.75
Lavender, U. S. P., tins	lb.	3.25	7.00
Spanish, cans	lb.	1.20	1.60
Lemon, Ital., U. S. P.	lb.	1.85	2.10
Lemongrass, native, cans	lb.	.70	.80
Linaloe, Mex., cases	lb.	1.35	1.50
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Orange, Sweet W. Ind., tins	lb.	2.40	2.50
Italian cop	lb.	2.75	4.00
Distilled	lb.	.65	.70
Origanum, cans, tech.	lb.	.70	.75
Patchouli	lb.	3.00	3.50
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Imported	lb.	1.35	1.70
Peppermint, nat., cases	lb.	1.75	2.10
Redis., U. S. P., cases	lb.	2.05	2.30
Petit, Grain, S. A. tins	lb.	1.00	1.15
Pine Needle, Siberian	lb.	.90	.95
Rose, Natural	oz.	5.50	18.00
Artificial	oz.	2.00	3.00
Rosemary, U. S. P., tins	lb.	.34	.45
Tech., lb. tins	lb.	.30	.40
Sandalwood, E. Ind., U. S. P.	lb.	5.00	5.50
Sassafras, U. S. P.	lb.	.75	1.00
Artificial	lb.	.45	.50
Spearmint, U. S. P.	lb.	1.65	1.70
Thyme, red, U. S. P.	lb.	.58	1.02
White, U. S. P.	lb.	.65	1.10
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Anethol	lb.	1.00	1.10
Benzaldehyde, tech.	lb.	.60	.65
U. S. P.	lb.	1.10	1.30
Benzyl, Acetate	lb.	.56	1.00
Alcohol	lb.	.65	1.15
Citral	lb.	2.40	2.60
Citronellal	lb.	2.05	2.50
Citronellol	lb.	2.10	2.65
Citronellyl Acetate	lb.	4.50	7.00
Coumarin	lb.	3.10	3.30
Cymene, drums	gal.	.90	1.25
Diphenyl oxide	lb.	.85	1.25
Eucalyptol, U. S. P.	lb.	.50	.55
Eugenol, U. S. P.	lb.	2.00	2.50
Geraniol, Domestic	lb.	1.25	2.00
Imported	lb.	2.00	3.00
Geranyl Acetate	lb.	3.00	3.50
Heliotropin	lb.	2.00	2.10
Hydroxycitronellal	lb.	3.50	9.00
Indol, C. P.	oz.	2.00	2.50
Ionone	lb.	3.60	6.50
Iso-Eugenol	lb.	3.00	4.25
Linalool	lb.	1.65	2.25
Linalyl Acetate	lb.	1.85	4.25
Menthol	lb.	3.50	3.60
Methyl Acetophenone	lb.	2.50	3.00
Anthranilate	lb.	2.15	3.20
Paracresol	lb.	4.50	6.00
Salicylate, U. S. P.	lb.	.40	.45
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Phenylethyl Alcohol, 1 lb. bot.	lb.	4.00	4.50
Rhodinol	lb.	5.75	8.00
Safrol	lb.	.60	.62
Terpineol, C. P., 1,000 lb. drs.	lb.	.33	.35
Cans	lb.	.36	.37
Terpinyl Acetate, 25 lb. cans	lb.	.80	.90
Thymol, U. S. P.	lb.	1.40	1.50
Vanillin, U. S. P.	lb.	3.00	3.50
Yara Yara	lb.	1.30	2.00

Insecticide Materials

Insect powder, bbls.	lb.	.15	.17
Concentrated Extract			
5 to 1	gal.	1.25	1.30
20 to 1	gal.	3.75	4.40
30 to 1	gal.	5.60	6.20
Derris, powder—4%	lb.	.41	.45
Derris, powder—5%	lb.	.46	.50
Cube, powder—4%	lb.	.39	.43
Cube, powder—5%	lb.	.44	.48

Gums

Arabic, Amb. Sts.	lb.	.14	.15
White, powdered	lb.	.17	.18
Karaya, powdered No. 1	lb.	.09½	.10
Tragacanth, Aleppo, No. 1	lb.	1.20	1.25
Sorts	lb.	—	.25

Waxes

Bees, white	lb.	—	.33½
African, bgs.	lb.	.23	.24
Refined, yel.	lb.	.27	.28
Candelilla, bgs.	lb.	.16	.17
Carnauba, No. 1	lb.	.52	.54
No. 2, yel.	lb.	.48	.50
No. 3, chalky	lb.	.39	.41
Ceresin yellow	lb.	.36	.38
Paraffin, ref. 125-130	lb.	.04¼	.04½



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PALM KERNEL OIL
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LEVER WINS HEALTH SOAP CASE

(From Page 24)

The distribution by others at odd times and in separate localities of red carbolie soap, the manufacture of which has long since been abandoned, does not militate against the right of this plaintiff to be protected in its success in popularizing reddish toilet soap prior to the time when a similar soap was placed upon the market. The conclusion is inescapable that defendant intentionally imitated the plaintiff's soap and placed its imitation upon the market solely for the fraudulent purpose of appropriating plaintiff's reputation and investment and to attribute to defendant's product a false origin.

"When unfair competition is so designedly accomplished, all opportunity to continue it in any form should be prevented by an injunction sufficiently broad to insure such a result" (*Mainzer v. Gruberth, supra* 93).

Plaintiff is entitled to an injunction restraining defendant from manufacturing or selling soap carbolie in odor or octagonal in shape which is of a red, reddish or coral color, and from using the designation "health soap." Judgment is directed for the plaintiff. Exception to defendants. Thirty days' stay. Submit findings of fact and conclusions of law."

SOAP PERFUME SUGGESTIONS

Lilac is one of the most widely used soap perfumes. The terpineol when used alone is not a good perfume, or is it lasting unless blended and fixed. Good terpineol costs much more than a poor quality, but it is well worth the extra cost. The following formula gives a perfume of which 2 per cent or more is to be added in milling soap base: Terpineol 690 parts, jasmin synthetic extra 20, benzyl acetate 20, geranium oil 62, rose femelle oil 124, and peru balsam 84 parts.

A begonia perfume for soap is rather complex. It contains phenylethyl alcohol 200 parts, synthetic jasmin 150, geranium oil 120, hydroxycitronellal 100, rhodinol 60, citronellol 60, geraniol 40, sandalwood oil 40, patchouli oil 40, ylang oil bourbon 35, bergamot oil 35, benzyl acetate 15, orris concrete 15, peru balsam 60, and benzyl benzoate 30 parts. One to two per cent of the perfume is added in milling soap base.

Carnation perfume is always a popular perfume for soap and in regular demand. The perfume shows a tendency to yellow with age, but this may be largely disguised by a faint pink color for the soap, which may later become a pleasing salmon pink. The quantity of perfume used is 1 to 2 per cent in milling the soap base. A formula for carnation perfume is as follows: Heliotropin 25 parts, musk ambrette 25; these are dissolved in 200 parts of terpineol with gentle heating, and 20 parts of benzoyl isoeugenol added; isoeugenol 220 parts, geranium oil 120, amyl salicyl 100, rose femelle oil 75, clove oil 50, cananga oil 50, petitgrain oil 40, bromstyrol 25 and peru balsam 50. *Perfumery and Essential Oil Record*, Special Number (1935).

Douglas W. Coutlee, advertising director for Merck & Co., New York, was elected vice-president of the Pharmaceutical Advertising Directors Club at a recent meeting in New York.



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PRODUCTION SECTION

A section of SOAP devoted to the technology of oils, fats, and soaps published prior to Jan. 1, 1932, as a separate magazine under the title, *Oil & Fat Industries*.

The sulfonation of oils and other fatty derivatives becomes increasingly important. This is the second section of an article on the manufacture, properties and application of various

SULFONATED OILS

(PART II)

By A. E. Sunderland

CONSIDERING the practical manufacture of sulfonated oils, the chief requisite is a supply of oil as free from moisture, sediment, and mucilaginous material as possible. Before accepting a large delivery of oil, it is a good practice to try a small sulfonation test on the oil in the laboratory, and this will act as a very good guide as to its freedom from dissolved impurities, and also as to whether it will give a satisfactory product when sulfonated in bulk. The next requisite is the quality of the sulfuric acid. The strength of acid used is usually 66° B., containing 94-95 per cent H_2SO_4 . The question as to whether an acid of greater strength would not give a superior sulfonated product is complicated by the fact that a stronger acid develops more heat in the presence of water, and greater care and more cooling are required to keep the temperature within limits. In order to obtain good temperature control, it is necessary that the oil in the tank, and the pipe feeding the sulfuric acid into the oil, and the thermometer recording the temperature, should all be in clear view of the operator, at the same time. In some installations, the level of the oil tank is flush with the floor so as to facilitate the filling of the tank with oil from barrels, but this is not a good feature as it means that the tanks have to be kept covered while operating, and it is impossible to observe the reaction taking place, or notice the smell of the mixed oil and acid which to the prac-

tical operator is one of the best guides as to the satisfactory progress of the sulfonation. It is therefore best to have the level of the tank about 24-30 inches above floor level, and uncovered, then a good operator can see what he is doing, and can correct any faults before it is too late. Some oils, like castor oil, cod oil, sperm oil, and a few others, when properly sulfonated, will give a clear solution if a few drops of the acid oil are dropped into distilled water, but there are quite a number of other oils, like corn oil and rapeseed oil, which do not give a clear solution with distilled water, no matter how long we proceed with the sulfonation. Therefore, uniform results with such oils can only be obtained by keeping all conditions, such as time and temperature as constant as possible.

The proper temperature for sulfonation lies between 85°-90° F. Because much heat is developed by the action of the sulfuric acid, it is best to start at 60° F., in order to have the reaction well under control. Some oils will stand a temperature slightly higher than 95° F., without much ill effects, while others are more readily affected. This remark refers to a continued treatment at these temperatures, but as will be shown later, a large number of oils will withstand a temperature of 130-135° F. for a short time before secondary reactions gain much headway. From the above, it is easily understood that the sulfonation reaction will proceed in a some-

what different way if it is started at a higher temperature than 60° F. If started at a higher temperature, the flow of acid must be slower and will be extended over a longer time period in order to prevent overheating. Thus if we allow a time of eight hours for the sulfonation, we must surely expect different results if we introduce all the acid within one or two hours, then let it react for four to six hours more, than if we introduce the acid over a period of four to five hours, and let the acid react for two to three hours longer.

The washing should also be carefully standardized. One can wash in an equal amount of water, or in double the amount of water, or even more. The water can be replaced by a Glauber's salt solution, or we can regulate the temperature of the wash water, using wash waters at 80°, 90°, or 100° F., and finally one can give the solution much agitation, or little.

We can leave the oil with the first wash water to settle overnight, or we may withdraw the first water after thirty minutes or an hour and neutralize the remaining sulfuric acid, more or less. Again, we can run the oil into a standardized caustic soda solution, just strong enough as to not quite neutralize all the free sulfuric acid. All these different methods of washing the sulfonated oil give different modifications of the oil, principally in the amount of free fatty acid produced, and on neutralizing, or clearing the oil, as it is termed, the proportion of fat combined as soap, varies. Thus the importance of working under standard conditions, to obtain a uniform product, is easy to be understood. Even when working under standard conditions, some variation in the oil, or climatic conditions, may cause the finished product to come short of the required specifications, and the batch has to be adjusted. On account of this possibility the practice is to aim at the production of a medium sulfonated oil, and if adjustment is necessary, the correction can be made by the addition of a quantity of high sulfonated oil if the oil is undersulfonated, or by the addition of a quantity of raw oil if the oil is oversulfonated.

The equipment required for the commercial production of sulfonated oils, consists of a sulfonating tank (usual capacity ten barrels), two mixing tanks (capacity $3\frac{1}{2}$ times that of the sulfonating tank, or 35 barrels), and four settling tanks (capacity about twice that of the sulfonating tank, or 20 barrels). The sulfonating tank is made of iron, the two mixing tanks are usually wood with lead lining, and the settling tanks are wood with or without lead lining, but should be constructed with sloping bottoms, so as to allow of drawing off the water completely without excessive loss of sulfonated oil. The tanks are arranged one above the other, the sulfonator being placed at the top, and the settling tanks at the bottom, so as to allow of gravity flow from one operation to the other. This installation will handle three batches of oil in 24 hours.

The three methods of sulfonation, namely high sulfonation, quick sulfonation, and concentrated low-temperature sulfonation, will be briefly described, first a

general description of the process, and afterwards a more detailed description of the sulfonation of the individual oils.

High Sulfonation Method:—Usually used for cod, sperm, cottonseed, and castor oils. Temperature of oil = 60° F. Sulfuric acid = $27\frac{1}{2}$ per cent on the weight of the oil.

The acid is run in as fast as is possible, but not to cause the temperature to rise above 95° F. For a ten barrel lot, this takes about three to four hours. The mixture is now agitated for five to six hours longer, or until a sample in the case of cod oil is soluble in distilled water without opalescence. With cottonseed oil the solution will be slightly translucent. The oil is now dropped into the mixing tank, containing two and one-half times the volume of oil of Glauber's salt solution, 10° B. Agitate smoothly for five to ten minutes and warm to 104° F. Allow to separate. Draw off the water and make the oil nearly neutral to methyl orange with caustic soda. Allow to stand overnight. It is to be noted, that according to the acidity of the oil at this stage, when allowed to stand, the amount of free fatty acid in the finished oil can be regulated. Next morning, draw off the water again, and clear with caustic soda.

Quick Sulfonation Method:—Usually used for oleic acid, cod oil, castor oil, neatsfoot oil, refined corn oil, and mixed oils. Sulfuric acid = $22\frac{1}{2}$ per cent on the weight of the oil.

The acid is run into the oil quickly while the oil is violently agitated. With a ten barrel batch of oil, the acid takes about thirty minutes to run in. The temperature rises quickly and as soon as it reaches 130-135° F., the oil mixture is dumped quickly into a mixing tank situated underneath the sulfonating tank. The mixing tank contains Glauber's salt solution 10° B, equal to double the volume of the oil. The Glauber's salt solution is at room temperature. The oil and Glauber's salt solution is agitated smoothly for five to ten minutes and the oil allowed to separate. Separation is nearly complete in half to one hour. The clear water is drawn off to a storage tank, and after neutralizing with caustic soda, is used over again for the next batch. The oil is neutralized with caustic soda until it is nearly neutral to methyl orange, that is, slightly on the acid side. Allow the oil to stand until morning and a further separation will take place. When the oil is completely separated, and the water drawn off, the oil should test twenty per cent water. It is now cleared by the addition of further caustic soda. In winter time, it is better to use caustic potash for the final finishing, as it gives a more liquid oil. In testing the acidity of the oil, after the first separation, it is recommended to use an ether and salt solution for the titration with methyl orange.

Concentrated Low Temperature Sulfonation:—Usually only used for castor oil. Sulfuric acid 100 per cent strength. Use same weight as oil. Diluent is ethylene dichloride. Use same weight as oil.

Run the acid in slowly to the previously cooled oil and solvent mixture. Do not allow the temperature to rise above 60° F. After the acid is all in, continue stirring until a few drops dissolve perfectly clear in distilled water, and also dissolve perfectly clear in a saturated solution of calcium sulfate. Do not continue stirring after this point, but then add to it a 5 per cent solution of Glauber's salt solution, equal in volume to three times that of the sulfonated mixture. The solution of Glauber's salt is kept cool by means of ice. The temperature not being allowed to rise above 60° F. Allow to separate, and wash twice with 25 per cent Glauber's salt solution. Separate, and add caustic soda until neutral, and then distill off the solvent.

Concentrated Low Temperature Sulfonation (for fatty acids):—Usually only used for oleic acid, and castor oil fatty acids, (Ricinoleic acid). On a large scale some manufacturers use a Pfeleiderer mixer, brine cooled, while others use a system, wherein the sulfuric acid and oil are sprayed simultaneously by a whirl disc system into a large reaction vessel, being sufficiently cooled previously so that the heat of reaction does not cause the product formed to become unduly heated before running out of reaction vessel. Sulfonation uses 100 lbs. fatty acids and 100 lbs. sulfuric acid 100 per cent strength.

Keep temperature below 50° F. while adding the sulfuric acid. Sulfonation time is 50-60 minutes. Wash with Glauber's salt solution 12-15° B. twice, keeping temperature below 70° F. Let stand overnight to separate and neutralize with caustic soda. The product is allowed to stand 3-5 days at 15-20° C. to allow the Glauber's salt to crystallize out. This crystallization can be improved by the addition to the oil of a small quantity of a volatile solvent such as xylene, trichloroethylene, carbon tetrachloride, etc.

WE give below the log on the quick sulfonation of a few oils which will illustrate the methods more particularly. It is not necessary to particularize the high sulfonation of particular oils, because the temperatures are controlled and are alike in each case.

Quick Sulfonated Oleic Acid:—800 lbs. oleic acid 10° C. titer, 180 lbs. sulfuric acid 93 per cent. This is equal to 22½ per cent on the weight of the oil. Temperature of the oil at the start 26° C. Temperature of the room 26° C. Temperature of cooling water 10° C.

The acid was run in at a speed that took 10 minutes for the total addition. Temperature of the oil, at the end of acid addition was 52° C. The oil was agitated for a further period of 50 minutes, making the total time for sulfonation one hour. The oil was then run into 200 gallons of a 20 per cent Glauber's salt solution. The oil separated in one hour and was then neutralized with a caustic soda solution of 34° B. It took 132 lbs. of caustic soda solution 34° B. to give a finished product.

Quick Sulfonated Corn Oil:—800 lbs. corn oil. 180 lbs. sulfuric acid. This is equal to 22½ per cent on the weight of the oil. Temperature of the oil at the

start 23° C. Temperature of the room 27° C. Temperature of cooling water 13° C.

In this sulfonation, special precautions must be taken to obtain efficient cooling. The acid was run in at a rate which took 15 minutes to make the total addition. Temperature of the oil after the acid was run in 37° C., which rose to 40° C. five minutes after the total addition of acid. The oil was agitated for a further 45 minutes, after the addition of the acid, making the total time of the sulfonation one hour. Temperature of the oil, at the end of sulfonation 32° C. The oil was then run into 200 gallons of a 20 per cent Glauber's salt solution. The oil did not separate very readily and was left to stand overnight. The oil was then separated and neutralized with caustic soda solution 34° B. It took 72 lbs. of caustic soda solution, 34° B., to make a finished product.

Quick Sulfonated Cod Oil:—800 lbs. Cod Oil. 180 lbs. Sulfuric Acid 93 per cent, which equals 22½ per cent on the weight of the oil. Temperature of the oil at the start 17° C. Temperature of the room 24° C. Temperature of the cooling water 13° C.

Special precautions for cooling are to be taken in sulfonating this oil. The acid was run into the oil at a speed which took 12 minutes to make the total addition. Temperature of the oil after the addition of the acid 36° C. The oil was then agitated for a further 48 minutes, making the total time of sulfonation one hour. Temperature of the oil at the end of sulfonation 35° C. The oil was then run into 200 gallons of Glauber's salt solution. The oil separated in four hours, separated, and neutralized with caustic soda solution, 34° Baume. It took 134 lbs. of caustic soda solution 34° Baume to give a finished product. This oil would have been better to stand longer before separating.

Quick Sulfonated Olive and Corn Oil:—400 lbs. Corn Oil. 400 lbs. Denatured Olive Oil. 180 lbs. Sulfuric Acid 93 per cent, equals 22½ per cent on the weight of the oil. Temperature of the oil 26° C. Temperature of the room 27° C. Temperature of cooling water 13° C.

Special precautions for cooling are to be taken in sulfonating this mixture. The acid was run into this oil at a speed which took 15 minutes to make the total addition. Temperature of the oil after all the acid was added, 50° C. The oil must have contained a small amount of water to give this increased temperature. This is a little high because if the oil is allowed to reach the temperature of 56° C. the sulfonation must be stopped immediately by dropping it into the Glauber's salt solution, or otherwise the oil will be burnt and of no use. If it is stopped immediately and mixed with the Glauber's salt solution, it can be utilized by blending with other batches of sulfonated oil. The oil was then agitated for a further 45 minutes, making the total time of sulfonation one hour, and run into 200 gallons of a 20 per cent Glauber's salt solution. Temperature of the oil after sulfonation was 44° C. The mixture was allowed to stand overnight, separated, and neutralized with caustic soda solution, 34°

Baume. It required 72 lbs. of caustic soda solution, 34° Baume, to give a finished product.

The quick sulfonated oils, on account of their low water content, will mix with mineral oils in almost any proportion, and will also take up a larger amount of neutral fatty oils than high sulfonated oils. They will not, however, carry the same amount of water as high sulfonated oils without showing turbidity.

(To be concluded)

SEARCH FOR BY-PRODUCT FATS

(From Page 33)

—to hydrolyze the fat. The fatty acids thus obtained are then distilled. The Twitchell process yields fatty acids of a high percentage and gives correspondingly good yields of glycerin. It is important that the splitting reaction be carried out in a vacuum, or else the fatty acids produced by this process become comparatively deeply-colored. It has been found that the larger the percentage of the Twitchell reagent used, the darker is the product obtained. Less than 1 per cent is now used.

For the quality of fatty acids, very much depends upon the distillation process. It is, as a matter of fact, the biggest factor in the improvement of low grade fats. A great deal of progress has been made in recent years with the introduction of vacuum distillation. A method has been patented for the maintenance of a high vacuum for use in the distillation of fatty acids with steam under vacuum, by means of freezing out the steam in solid form after first condensing the distilled vapor and then withdrawing the residual gases with a vacuum pump. The continuous distillation process, which is based upon the rising of steam countercurrent to the fatty acids, is superseding the batch process, with excellent results. The amount of fat in the still at any one time is very small and the fat does not become scorched or injured in other ways on account of overexposure to excessive heat. The fat is brought up to temperature and vaporizes at once. It does not remain in the heated area. In addition to making for higher and more uniform grades of product, the continuous still produces a higher yield and less pitch. It is also much more economical than the batch process from the point of view of consumption of steam and water, the amount of labor required in handling, and the amount lost in distillation. The continuous still can handle considerably larger quantities of fat before it has to be cleaned out. Batch distillation now costs about three times as much as continuous distillation.

Nitrogenous impurities in oils cause foaming during distillation of the fatty acids. They can be removed with either hydrochloric acid, alum, concentrated sulfuric acid, or by heating to a high temperature. Care must be taken in the handling of fatty acids, as they cannot be stored in iron holders on account of the fact that they react with the metal, and very rapidly become red, and then brown, in color. They should be used as

soon as possible after they are prepared, as the barrels in which they are kept readily become leaky.

Commercial oleic acid or red oil is found on the market in two qualities: "saponification oleine" and "distillation oleine." "Saponification oleine" is prepared by the autoclave process, with subsequent pressing to remove stearine. All the neutral fat that has escaped hydrolysis in the autoclave process and all the unsaponifiable matter contained in the fats that are autoclaved are found in this product. Unless "saponification oleine" is freed from stearine by proper wintering, it contains a good deal of solid fatty acids. "Saponification oleine" is generally of a dark color, and is therefore unsuitable for certain soapmaking purposes, but it can be successfully bleached. "Distillation oleine" is prepared by the sulfuric acid hydrolysis process and is distilled. This sulfuric acid hydrolysis process consists of saponifying the fat and then decomposing the soap with acid to obtain the fatty acids, which are then distilled. "Distillation oleine" is a pale, transparent oil and usually contains small or negligible quantities of solid fatty acids. "Distilled grease oleine" is best "distillation oleine."

Oleic acid stands in high favor for textile soaps, dry cleaning soaps, and other specialties, but it can be used for ordinary soaps as well. Oleic acid soaps are purported to cleanse better than soap made from neutral fats. They lather more freely than soaps prepared from tallow, but they produce a slimy rather than a firm lather. They have a tendency to absorb water, and therefore sweat and damp weather. Red oil soaps are obtained quite neutral and therefore do not leave a residual odor on goods treated with them. Various other advantages are claimed for the use of red oil in soaps, among them being that sodium carbonate, in the form of soda ash or crystals, can be used for saponification rather than caustic soda.

(To be concluded)

Palm oil liquid and solid components, at the temperature prevailing in Malaya, which is about 84° F., can be isolated by filtration under various degrees of pressure. The liquid or olein portion has an iodine number of 61.3 and consists of glycerides of 64 per cent liquid, and 36 per cent solid fatty acids. It is red in color owing to the presence of carotene. The free fatty acids from the original oil accumulate in the palm olein. It may be used directly as an edible oil, or it may be bleached by sunlight. The 10 to 20 per cent of solid portions of the palm oil are powdery, almost colorless, with a melting point of 54.9° and an iodine number of 11.7. This portion contains 0.8 per cent of free acid. The glycerides are mostly those of palmitic, myristic and stearic acids, the remainder being olein. In combination with coconut oil the solid fat can be used to produce a satisfactory soap, or it can be used as a source of fatty acids for candles. T. A. Buckley. *Malayan Agr. J.* 23, 315-20 (1935).

Borax Soaps

BORAX and other boron compounds are used in soap preparations mainly for their buffering action in the presence of alkali. The effect is to reduce the pH, that is, the hydrolysis alkalinity of a soap solution. A discussion of the usefulness of borates to the soap industry is given by A. J. Sullivan in the *Soap, Perfumery and Cosmetics Trade Review* for September, 1935.

The following pH values show that the alkalinity of solutions of borax, $\text{Na}_2\text{B}_4\text{O}_7 \cdot 10 \text{H}_2\text{O}$, is very little affected by concentration, but markedly affected by temperature:

Concentration of borax Percent	pH Values at	
	18°C.	60°C
3.82	9.27	8.90
1.91	9.22	8.86
0.39	9.20	8.88
0.19	9.19	8.89

A 5 per cent solution of soap gave a pH value of 10.26, but when the same amount of soap was dissolved in water containing 0.5 per cent of borax, the pH of the resulting solution was only 8.9. For some purposes this pH value may be considered low, in which case the alkalinity is raised by the addition of other fillers such as perborate, trisodium phosphate, or sodium silicate.

Borax tends to be carried to the surface of the soap in the cooling frame, imparting a harsh gritty feel to the soap. The amount of borax which can be added without this occurring is about 0.2 per cent. This amount can be increased if other fillers are present. The most convenient way of introducing borax is in the form of its lesser known salt, sodium metaborate. A solution can be prepared by adding 20 pounds of borax to a strong solution of caustic soda obtained by dissolving 5 pounds of caustic soda in 1 gallon of water, and evaporating down to a specific gravity of 1.600. This solution is incorporated into the soap in the crutcher. In order to obtain a smooth tenacious soap 2.5 per cent of soda ash is also used. The appearance and texture of the soap can be improved further by the addition of some sodium silicate and mineral oil.

A good laundry soap containing about 1.7 per cent of borax can be obtained with the following formula:

	Pounds
Finished soap	1,100
Soda ash	15
Solution of sodium carbonate (30%)	25
Solution of sodium metaborate (sp. gr. 1.6)	25
Silicate of soda (40°)	85
Soap stock (paraffin oil 25°)	40

This soap has excellent keeping qualities. The nature and proportion of the fats and oils are important. As a rule, cottonseed, coconut and palm kernel oil take up and hold fillers better than tallow and hardened oils. The presence of rosin also assists. The proportion of coconut oil is increased when the soap is required to lather freely.

Relatively large quantities of borax can be used in the preparation of soap chips and soap powders. The

soap may contain large proportions of oils,—coconut and palm kernel oil tend to produce a smoother, thinner and less brittle chip. The difference however, is not very pronounced, and tallow, which is cheaper, can be used to the extent of 90 per cent. A formula is as follows:

Soap from the kettle.....	1,000 lbs.
Powdered borax	130 lbs.
Lye (40% Caustic soda).....	23 lbs.
Perfume to suit	

The soap is run into the crutcher, the borax, etc. added, and the whole crutched until thoroughly mixed.

When it is desired to add fillers before the soap is converted into powder, known as the "continuous process," the soda ash used takes up the excess water present with the soap, forming hydrated carbonate of soda. This obviates the necessity of drying. A laundry and household soap of this type is made as follows:

Soap	42 lbs.
Soda ash	42 lbs.
Powdered borax	15 lbs.
Salt	1 lbs.

The soap is run hot from the kettle into the crutcher, and after thoroughly mixing with the soda ash and the borax, it is run over chilling rolls to chill the soap and crystallize the salts. The product is scraped off the rolls, and the coarser particles ground further. Alternatively the mixture from the crutcher may be allowed to season for a few days, after which it is ready for powdering and packing. If fillers are merely mixed with powdered soap, the latter should have been well dried, to prevent caking. At least 20 per cent of anhydrous soap should be used. The proportion of borax is greatest where the soap powder is intended for use on delicate materials.

A non-caustic detergent borax jelly for washing delicate fabrics consists of:

Soap	16.6 lbs.
Soda ash	3.2 lbs.
Colloidal aluminum silicate	1.3 lbs.
Borax	0.8 lbs.
Sodium bicarbonate	0.4 lbs.
Water	1.8 lbs.

This is finally made up to 90-95 gallons with water.

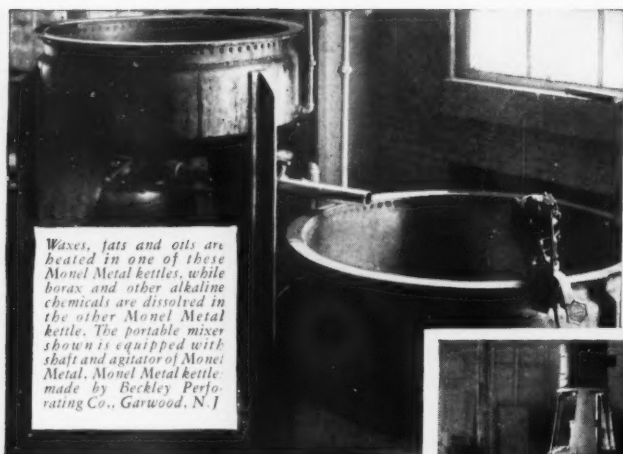
A solid hand cleaning preparation to be used without water and which removes dirt by rubbing with a dry cloth, is obtained with the following formula:

Oleic acid	4 parts
Turpentine substitute	1 part
Industrial alcohol	2 parts
Castor oil	1 part

This is neutralized with a solution of caustic potash (1.1). Two parts of water are added to form a paste, and 15 per cent of powdered borax incorporated.

A compound whose popularity as an ingredient in soap powders for laundry purposes, is extending rapidly, is sodium perborate. The compound yields its 10 per cent of active oxygen slowly when it is heated in water,

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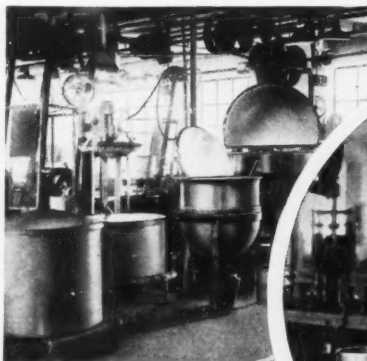
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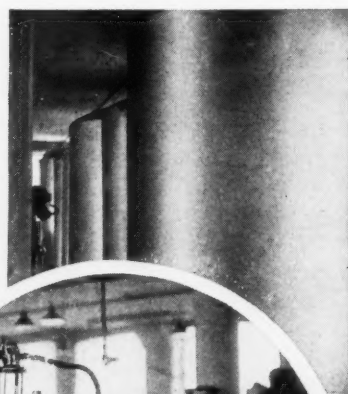
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These steam-jacketed kettles of Pure Nickel (560 x 300 gal. capacities) are used to process skin lotions. Funnels, utensils and containers are made of Monel Metal. Kettles fabricated by Lee Metal Products Company, Phillipsburg, Pa.



Karl Kiefer Filling Machines, fitted with Monel Metal filling and vacuum tubes. The over-head feed-pipes as well as the reservoirs are also of Monel Metal.

the rate of decomposition increasing as the temperature is raised above 40°C. At ordinary temperatures it is very stable. When dissolved in water and slowly heated, sodium perborate forms an alkaline solution which assists in the general cleansing operation, while the oxygen liberated acts mechanically in dislodging the dirt and also chemically with a marked bleaching action. It is claimed that this type of product reduces the washing wear on fabrics, as less rubbing is necessary.

Borax is considered most suitable for washing woollens and silks, while powders containing carbonate or silicate are used for washing cottons. These powders are illustrated in the following formulas:

1. Sodium perborate	37.5
Powdered borax	37.5
Powdered soap	25.0
2. Sodium perborate	10.0
Anhydrous sodium silicate	34.0
Sodium carbonate	17.0
Water	26.0
Powdered soap	13.0

In addition to the oxygen washing powders, there have been marketed washing blocks or tablets which are obtained from a soap base containing sufficient water so that, after crutching with perborate and borax, it is plastic enough to be cut into squares which are allowed to dry slowly. These are made up with various proportions of sodium perborate to borax; the amount of soap added varies anywhere from 15 to 85 per cent.

IGEPON T VERSUS METAPHOSPHATE

The value of Igepon T depends on its pronounced dispersing action on lime soaps, in addition to its lathering properties, while the value of sodium hexametaphosphate depends on the formation of complex water-soluble calcium and magnesium soaps. In two series of experiments, a liter of water of 40 degrees hardness containing 1 gram and 2 grams of soap, respectively, was treated with different amounts of Igepon T and sodium hexametaphosphate. Four grams of metaphosphate were found necessary to prevent completely the precipitation of calcium soap, irrespective of the amount of soap present. About 0.25 gram of Igepon T was required for the solution containing 1 gram of soap and 0.5 gram for the solution containing 2 grams of soap. Igepon T retained its lime soap dispersing properties even on great dilution. Metaphosphate lost its effect on continuous dilution as soon as the quantity present was insufficient to bind the calcium and magnesium salts in complex form. G. Schwen and H. Kuckertz, *Dyer* 74, 117-8, 141 (1935).

The Kreis test is not a definite and certain indicator of rancidity. Besides oxidative changes, enzymes may initiate and accelerate rancidity and partially destroy food values of the oil or fat. The use of such antioxidants as maleic acid, soybean flour, gum guaiac, sesame seed or hydrogenated sesame oil has been patented. Many metals accelerate rancidity, aluminum and tin being the least objectionable. G. A. Wieseahn, *Food Ind.* 7, 222-3, 275-6 (1935).

SOAP MILLING PRACTICE

In order to get a properly milled soap, various factors must be taken into account. The roller gaps should be set at the proper width by a feeler gauge. Flakes about 0.1 mm. thick give the best results. Flakes cut off by means of a sharp scraper knife from the top roller show the real thickness. If small grains appear in the soap tablets, this may be the result of improper adjustment of the roller gaps, which allows overdried soap particles to pass through them without being properly ground and mixed.

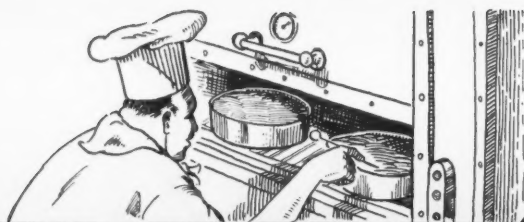
The chips used should have a proper moisture content. If too dry chips are used, more power is required for driving the mill and also scales may appear on the finished tablets. When it is difficult to get ribbons from the roller mill, it is usually because the soap chips are too dry. When the moisture content needs adjustment, it should not be done by adding water to the soap chips. If it seems necessary to use too dry a chip, the best way of increasing the moisture content is to add some raw undried chips and then mill until homogeneous.

Coloring matter should be thoroughly dissolved before being mixed with the chips. Otherwise minute undissolved particles make their appearance as spots on the finished tablets. Mix the color well and then add the perfume so that there will be no loss of the latter. The temperature of the rollers is another important factor. Good results are obtained at a temperature of 35-40° C. (95-105° F.). Too hot rollers cause evaporation of perfume and moisture, and cause blisters on the finished soap.

Flakes from the mill should always be quickly transferred to the plodder in order to retain the heat acquired in passing through the mill. It is advisable to install the roller mill so that the ribbons may fall directly into the hopper of the plodder. The use of belt conveyers for transmission of the ribbon to the plodder is to be avoided wherever possible. S. N. Banerji and U. Banerji, *Indian Soap J.* 2, 73-4 (1935).

Aldehyde rancidity can appear in the case of saturated compounds without the action of microorganisms. This was shown by irradiating pure methyl laurate and glycerol in quartz tubes with the aid of a mercury lamp. With methyl laurate the aldehyde reaction with Schiff's reagent appeared in 1½ hours, with the Kreis test after 12½ hours. In the case of glycerol the tests were positive after 3 and 12½ hours, respectively. H. Schmalfuss, H. Werner and A. Gehrke, *Margarine-Ind.* 27, 79-81.

Absorption spectra may be applied to fatty oil research. Curves have been obtained for acetic, elaidinic, linoleic, eleostearic and stearoleic acids, methyl acetate, ethyl oleate, and ethyl and methyl linolate. Differences between curves for impure and purified materials indicate that the absorption spectrum might be used for such differentiation. L. J. N. van der Hulst, *Rec. trav. chim.* 54, 639-43 (1935).



Foregone conclusion



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ON PRODUCTS AND PROCESSES

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Odorless soap of good quality was obtained from whale oil by adding 10 per cent of common-seal oil sulfonated at 25° with 25 per cent of sulfuric acid having a density of 1.84. L. Magnitzkii, K. Remizova and V. Izrailevich. *Masloboino Zhirovoe Delo* 11, 197-8 (1935).

To measure the lathering power of soap, a 5- or 10-gram standard cake of soap is tied in a linen bag and agitated under standard conditions with 200 cc. of water in a small glass churn. The volume of foam is then read. The amount of soap dissolved can be determined by filtering and acidifying a measured amount of soap solution and measuring the amount of fatty acids liberated. Alternatively, the time and amount of soap required to yield a given volume of foam can be determined. C. Stiepel. *Allgem. Oel- u. Fett-Ztg.* 32, 63-5 (1935).

A cleansing composition consists of a lime-resistant, surface-active compound containing at least 8 carbon atoms and at least one terminal radical adapted to increase water-solubility, together with a water-soluble salt of a phosphoric acid poorer in water than ortho-phosphoric acid. Henkel & Cie. G.m.b.H. Canadian Patent No. 353,581.

Naphthenic acids which are obtained as a by-product in the refinement of petroleum, may be used in a purified form in the manufacture of soap. The method for their detection in soap is first to carry out an ordinary Polenske determination on the fatty acids from the soap. To the neutralized Polenske acids add a small quantity of copper sulfate solution. Filter off and dry the precipitated copper soaps. Test the solubility of these soaps in a suitable petroleum distillate, such as the fraction boiling from 90 to 120°C. Copper naphthenate is soluble and if present will give a green solution. *Perfumery and Essential Oil Rec.* 26, 362 (1935).

Washing agents for crude wool are made by transforming fatty acids such as stearic and lauric acids to esters with aromatic compounds of phenolic structure. One or two sulfonic groups are introduced into the phenolic group and the products neutralized with lime or ammonia. A small amount of phosphorus pentachloride, phosphorus oxychloride or sulfur oxydichloride is used, before, during or after the sulfonation. Kurt Lindner. French Patent No. 782,280.

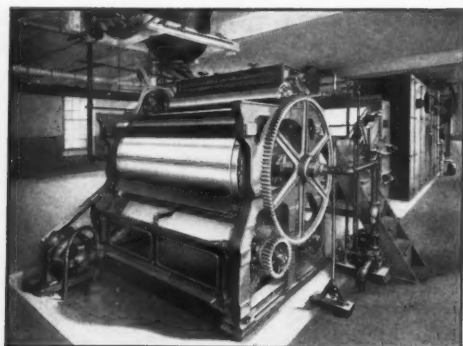
Soap apparently owes its disinfectant power to the combined action of the various ions and to the undissociated soap molecules. Additions of phenol and like materials to soap do not cause as great an increase in disinfecting power as might be expected. Siegfried L. Malowan. *Seifensieder-Ztg.* 62, 567-8 (1935).

Monoacyl derivatives of cyanamide, derived from carboxylic acids having at least 10 carbon atoms, are used as dispersing agents and as auxiliaries in aqueous textile treating baths. The preparation of stearoylecyanamide is described, for which stearin chloride, bromide or iodide is treated with cyanamide in ether. Heinz Hunsdiecker and Egon Vogt. British Patent No. 428,091.

An experimental comparison of the protection against rancidity afforded by green wrappers and by the antioxidants maleic acid, phthalic acid, hydroquinone, pyrogallol, catechol and guaiacol showed that the green wrappers gave more protection than the antioxidants. Oils or fats stored at low temperatures away from the light remained fresh longer than if treated with an antioxidant or packaged in green and then exposed to light at room temperature. Mayne R. Coe and J. A. Le Clerc. *Oil & Soap* 12, 231-3 (1935).

An oil suitable for soap manufacture is that obtained from the emu, a bird weighing about 200 pounds, native to Australia. The oil is yellow in color, with an odor somewhat resembling that of mutton fat. It consists of the glycerides of oleic, linolenic, palmitic and stearic acids. The presence of linolenic acid is notable, since this acid is seldom found in an animal fat. The oil possesses the following physical and chemical characteristics: Melting point 30-31°C., acid value 1.7, saponification value 195.2, Wijs iodine value (2 hours) 95.5, and unsaponifiable matter 0.2 per cent. Solid acids present amount to about 40 per cent and liquid acids about 60 per cent. F. R. Morrison. *J. & Proc. Roy. Soc., New South Wales*, 60, 113-8 (1935).

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SYNTHETIC TALLOW

"Oil foots" from alkali refining of fish oils containing 10-20 per cent of the original oils were completely saponified with caustic soda. The product was decomposed with dilute sulfuric acid and the mixed fatty acids were washed with hot water. Synthetic "tallow" was prepared by fractional distillation of the fatty acids under reduced pressure. From 700 grams of starting material having an acid number of 134, a solid portion of 170 grams having an acid number of 208, and a liquid portion of 130 grams having an acid number of 185.5, were obtained. The distilled fatty acids were esterified with glycerol, giving a product with an acid number of 5 and an iodine number of 51. The fat was then hydrogenated with a nickel catalyst, to give a product with an iodine number of 30 and a melting point of 47° C.

Purified fish oils were further saponified with caustic soda, salted out with brine, the soap decomposed with sulfuric acid and the crude mixed fatty acids washed with hot water and hydrogenated with a nickel catalyst at above 200° C. Repeated fractional distillation with steam gave a fraction which on esterification with glycerol resulted in a product having a composition similar to that of natural tallow. Synthetic butter was also prepared. The synthetic fats had a butterlike odor and were satisfactory for cooking and table use. Sei-ichi Ueno. *J. Soc. Chem. Ind., Japan* 38, Suppl. binding 237-41 (1935).

Wetting and cleansing agents are produced by oxidizing in the liquid state non-aromatic hydrocarbons of high molecular weight, taking care that a product is formed which contains unchanged primary material and substantial proportions of acids and alcohols. The carbonyl index should be below 10. This product is sulfonated, neutralized and extracted with a solvent which is afterward removed. I. G. Farbenind. A.-G. French Patent No. 781,854.

Emulsifying and softening agents for use in the textile industry are obtained by treating waxes with sulfonating agents in the presence of polyhydric alcohols. An example is the treatment of spermaceti oil with a crude glycerol sulfuric ester. Chemische Fabrik vorm. Sandoz. British Patent No. 428,520.

In the progressive hydrogenation of the esters of rape oil, hydrogenation of the linoleates proceeds selectively as compared with that of the oleates. Oleate is converted into stearate somewhat more readily than erucate into behenate. With the glycerides, the selectivity of the linoleic-oleic hydrogenation is less marked. The rape oil investigated contained about 50 per cent of di-C₁₈-erucin and about 44 per cent of mono-C₁₈-dierucin, where the C₁₈-acid is either oleic or linoleic. The remaining 6 per cent was mixed palmito-oleo-erucins. T. P. Hilditch and H. Paul. *J. Soc. Chem. Ind.* 54, 331-6T (1935).

BRUSHLESS SHAVING CREAM

A brushless shaving cream having a pearly sheen is considered desirable by some manufacturers. The sheen depends a great deal on manipulation and also on the temperature at the time of mixing. A formula is as follows:

Stearic acid	50.0 parts
Persic oil	6.0 "
Triethanolamine	1.5 "
Borax	1.0 "
Sodium perborate	2.0 "
Soap (powdered)	5.0 "
Diethylene glycol	3.0 "
Water	180.0 "

Place the borax, sodium perborate, and soap in 100 parts of water. Stir until dissolved, using a little heat. Add the stearic acid and persic oil and heat to 85° C. (185° F.). Stirring should be continuous. Heat the remainder of the water to the same temperature, add triethanolamine, and slowly pour this into the other solution. Stir continually until cool enough to add perfume, which is dissolved in the diethylene glycol. Keep the product at a temperature not below 60° C. (140° F.), for 24 hours. Pass through a homogenizer only after the sheen has developed. *Manufacturing Chemist* 6, 315 (1935).

STARCH AS SOAP FILLER

In Germany soap makers have been ordered to cut down on fat consumption, hence their interest in and study of all kinds of fillers. Hans Nitschke, writing in *Seifensieder-Zeitung*, 62, 840-1 (1935), says that up to 15 per cent of starch can be used soap without noticeably affecting the appearance and lathering power of the soap. It is not so suitable in white soap as in colored soap, however, as it tends to give the former a grayish cast. Also the sheen of a cake of soap tends to be lessened when starch is present. Starch in soap leaves the skin feeling smooth. A very high starch content, such as 45 per cent, intensifies this effect to the point where it may become unpleasant.

A formula for a good quality of shaving soap powder containing starch is as follows:

Potash stearin soap.....	55%
Other soap stock.....	35%
Starch	10%

The lathering power and foam stability are said to be improved by the addition of starch. Curd soap, semi-boiled soap and cold-processed soaps may also contain starch.

Synthetic oils are made by esterifying glycerol with the fatty acids obtained by distillation. Such synthetic oils made to resemble olive oil differ from the natural oil in that they have a greater viscosity, lack taste and are less stable. Because the synthetic oils are of lower value than the natural, they should not be sold as natural products or used as adulterants. F. Wittka. *Allgem. Oel- u. Fett-Ztg.* 32, 229-35 (1935).

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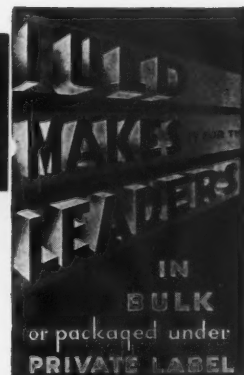
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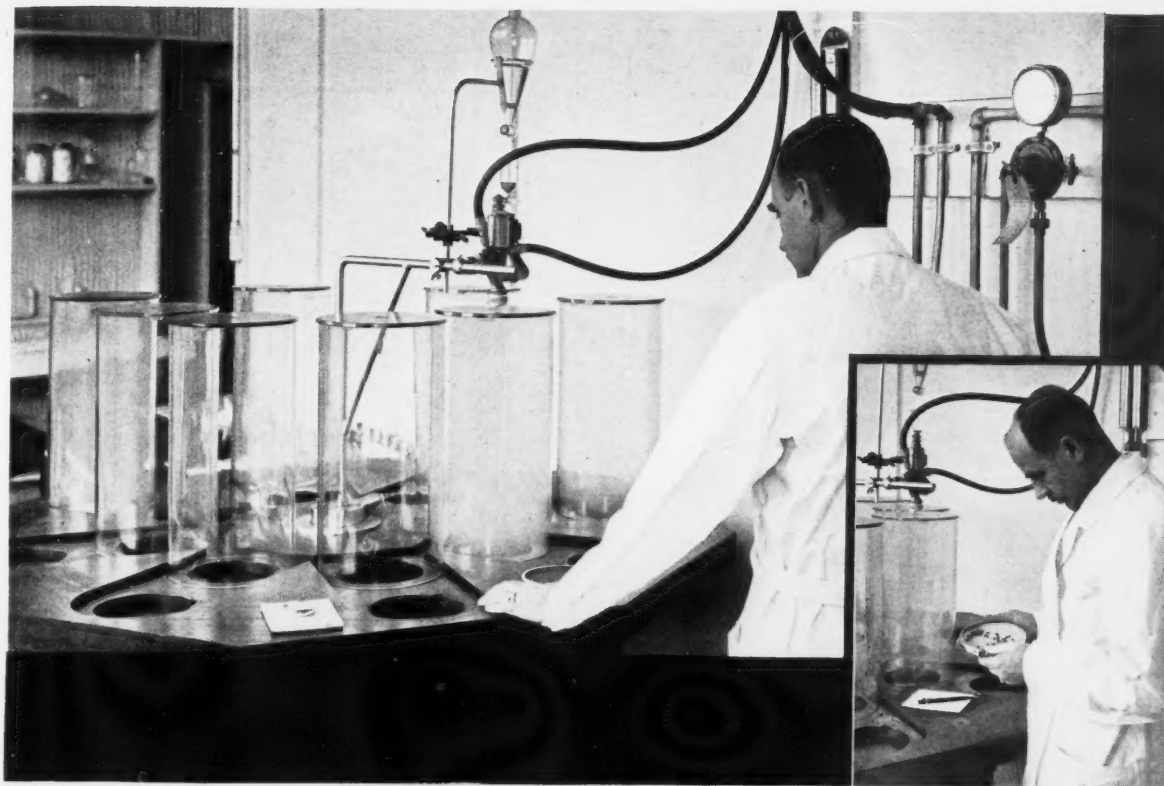
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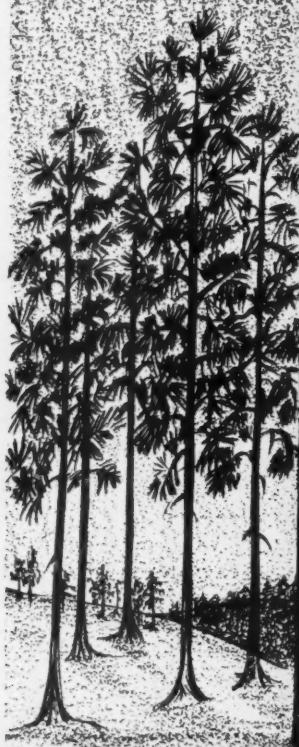
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SANITARY PRODUCTS



A Section of SOAP

Official Publication, Nat'l. Assn. of Insecticide & Disinfectant Manufacturers

The Editorial View

IN the light of present prices for pyrethrum products, we have wondered for some time just how, when and where cost plays a part in calculating these prices. Upon inquiry, we were enlightened by a well-known pyrethrum house. Their formula was about as follows: "We figure the cost of the flowers, milling, extracting, losses, containers, and the like,—and then we deduct ten per cent for overhead, and quote. It's all very simple when you know how." Yes, it is all very simple, but next summer, maybe the insecticide manufacturer will wish that his extract had cost him a little more. We have always heard that when there ceases to be a profit in a product for the seller,—look out for the product.

FROM a manufacturer of sanitary supplies, we hear some rather uncomplimentary things about the merchandising ability of the average janitor supply house. We are told that the hardware jobbers and the paper jobbers, particularly the former, are doing more and more business in janitors' supplies at the expense of the janitor supply firms. Why? Because the building owner or superintendent, or purchasing agent knows the hardware company much better and has done business with them for a much longer period of time. As the hardware firms, and paper houses get further into the janitor supply end of things, the buyer tends to give them preference. Then, there are too many instances of unreliable and irresponsible conduct for which some janitor supply houses must answer, and for which apparently all janitor supply houses pay in lost trade. And, as for merchandising, the hardware firms are held to be far ahead of the janitor suppliers. All of which,

although it is the view of only one manufacturer, but withal a keen and discerning one, should bring about a little thought in the ranks of the janitor supply trade.

MR. PUBLIC pays fifty dollars for a shotgun and one dollar for a box of shells. He expects to use up many a box of ammunition before thinking of buying a new gun. Mrs. Public pays fifty cents for a can of liquid insecticide, but balks at paying more than thirty cents for a spray gun. The shotgun and the spray gun do not fall into the same price class, but they are otherwise in the same category.

Who's to blame? The answer to the question is easy:— the manufacturer, the distributor, and the retailer. What to do? Only a concerted educational program will remedy the situation. Such a program must start with the manufacturer and end with the clerk behind the counter. The sprayer manufacturer must refuse to build and sell a sprayer that cannot do justice to the insecticide used in it. The distributor, or insecticide manufacturer, must insist upon a sprayer that "does right" by his product. The jobber and the retailer must be taught that cheap, inefficient sprayers are killing the insecticide business instead of the insects.

There may be other causes for this price demoralization in sprayer quality, but the solution hinges upon the "gun and ammunition" theory. The sooner everyone concerned,—manufacturer, distributor, jobber and retailer,—grasp that idea, the sooner will this stumbling block be removed from the path of the insecticide manufacturer.

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Notes of the Trade

C. Campbell Baird, president of Baird & McGuire, Inc., Holbrook, who was dangerously ill with pneumonia last month and spent several weeks in the hospital at Quincy, Mass., has recovered sufficiently to return to his desk.

Huntington Laboratories, Huntington, Ind., are building a new addition to their main plant in the form of a concrete structure 100 feet by 50 feet, according to an announcement by J. L. Brenn, president. The new building will house the cleaning, painting and storing of containers, which department will be moved from the main buildings to make room for increased manufacturing operations made necessary by business expansion this year.

James E. Marcuse of the Wesy Disinfecting Co., Long Island City, N. Y., has been designated as an additional member of the General Disinfectant Committee of the National Association of Insecticide & Disinfectant Manufacturers, according to W. B. Eddy, general manager of the Rochester Germicide Co., Rochester, N. Y., and chairman of the committee.

John Powell & Company, New York, have announced that Esler Johnson is now representing them on the Pacific Coast with headquarters at 461 Market Street, San Francisco. He will cover the states of California, Oregon, Washington and also western Canada. Mr. Johnson was formerly manager of the specialty sales department for the Associated Oil Company, San Francisco.

Economy Plumber Co., New York, has recently introduced a new line of products including "Economy" boiler cleaner, closet bowl cleaner, and enamel and porcelain cleaner.

The advertising account of William Peterman, Inc. New York, insecticides, was taken over Nov. 1 by the Thompson-Koch Company, Cincinnati.

IN NEW YORK—Dec. 8!

Plan now to meet your friends of the insecticide, disinfectant, and sanitary products trades in New York on Dec. 8. The 22nd annual meeting of the National Association opens Dec. 9 at the Waldorf-Astoria. Get in a day ahead and see everybody—an advance opportunity to talk business.

Insecticide-Disinfectant Meeting

Dec. 9-10 in New York

ANOTHER "ten-hour" meeting, the first of which proved so successful in Chicago last June, will comprise the 22nd annual convention of the National Association of Insecticide & Disinfectant Manufacturers to be held at the Waldorf-Astoria Hotel, New York, on December 9 and 10. The meeting will extend for two days with five hours of actual business sessions on each day, the object being to leave ample time for special group and committee meetings during the convention. The regular sessions will begin on Monday morning, December 9, but will be preceded by a regular yearly meeting of the Board of Governors at the hotel on the Sunday evening preceding, December 8, and also by various committee meetings on that day, according to an announcement by Charles P. McCormick, head of McCormick & Co., Baltimore, and president of the Association.



C. P. McCormick

A program embracing both technical and commercial subjects has been prepared by the program committee headed by H. W. Hamilton of the White Tar Co., Kearny, N. J. Legislation, market situations, commercial specifications, sales methods and salesmen, and other subjects will be discussed by various speakers. Pyrethrum extracts, the technical side of specifications, phenol coefficient in relation to disinfectant values, literature and patents, hand sprayers, care and treatment of floors, deodorizing blocks, insecticide testing, and other topics will comprise some of the technical discussions.

Among the speakers from outside of the Association membership are included Dr. Samuel C. Prescott, Dean of Science at the Massachusetts Institute of Technology, Cambridge, widely known authority of bacteriology and sanitation, who will talk on "The Development of Modern Sanitation and Disinfection". A discussion of floor products and floor maintenance under the title of "The Care and Treatment of Floors" will be presented by Richards Jarden, president of the Franklin Research Co., Philadelphia. Several speakers associated with the Department of Agriculture, Washington, will also be heard. Social security legislation will also be discussed by an outside authority.

During the convention, group luncheons will be served each day. At the close of the business sessions on Tues-

day, the annual informal dinner will be held at the hotel and will include a floor show of twelve acts. General arrangements for the meeting are in charge of John Powell of John Powell & Co., New York. Entertainment is in charge of Grant A. Dorland of the MacNair-Dorland Co. A questionnaire was recently sent to the membership covering the type of banquet and entertainment which they desire.

The following program which is as yet tentative has been released from the office of John H. Wright, Chrysler Building, New York, secretary of the Association:

PROGRAM

December 9, 1935

Monday Morning:

Meeting called to order by Pres. C. P. McCormick, McCormick & Co., Baltimore.

Roll Call.

"What's Ahead in the Insecticide Industry?"—Address of President C. P. McCormick.

Announcements.

"A Review of the Year, Including Legislation." Report of the Secretary, John H. Wright.

Report of the Treasurer, John Powell, John Powell & Co., New York.

Appointment of Committees.

Report of Entertainment Committee, Grant A. Dorland, MacNair-Dorland Co., New York.

"Antiseptics."—Report of Antiseptic Committee, Dr. George F. Reddish, Lambert Pharmacal Co., St. Louis.

Monday Afternoon:

Announcements.

"The Insecticide Situation"—Report of the General Insecticide Committee by W. G. Griesemer, The Black Flag Co., Baltimore.

"Effects of Container Metals on Pyrethrum Extracts"—Address by David Hoyer, John Powell & Co., New York.

"Hand Sprayers"—A symposium led by H. P. Lewis, Hudson Manufacturing Co., Chicago.

Report of Membership Committee—J. L. Brenn, Huntington Laboratories, Huntington, Ind.

"Insecticide Conditions on the West Coast"—Frederick Sykes, President, Pacific Coast, Insecticide Situation.

"Literature and Patents"—A report by O. M. Poole, Derris, Inc., New York.

"Discussion of a Standard Insecticide"—Report of the

Insecticide Standardization Committee, Dr. Alfred Weed, John Powell & Co., New York.

"Export Markets for Your Products"—C. C. Concanon, chief, Chemical Division, Department of Commerce.

"A Specification for Household Insecticides"—Dr. Robert C. White, Robert C. White Co., Philadelphia.

"Symposium on Purchasing Specifications"—Discussion by several representatives of large organizations and municipalities with reference to insecticide and disinfectant specifications.

December 10, 1935

Tuesday Morning:

Meeting called to order.

"The Present Situation in Disinfectant Sales"—A report of the General Disinfectant Committee, W. B. Eddy, Rochester Germicide Co., Rochester, N. Y.

"Review of Recent Scientific Developments in Disinfection"—A report of the Scientific Committee, Dr. Emil Klarman, Lehn & Fink, Inc., Bloomfield, N. J.

"Standardization of Disinfectants"—A report of the Standardization Committee, B. G. Philbrick, Skinner & Sherman, Boston, Mass.

"The Phenol Coefficient as a Measure of the Practical Value of Disinfectants"—John Varley, Baird & McGuire, Inc., St. Louis.

Report of Special Publicity Committee—Ira P. MacNair, MacNair-Dorland Co., New York.

"What's Wrong With the Sanitary Supply Business?"—A report of the Sanitary Specialties Committee, L. B. Schwarcz, Clifton Chemical Co., New York.

"The Care and Treatment of Floors"—Address by Richards Jarden, president, Franklin Research Co., Philadelphia.

"Deodorizing Blocks—Their Uses, Markets, and Prices"—Address by J. L. Brenn, president, Huntington Laboratories, Huntington, Ind.

"Sales Problems in Sanitary Supplies"—Committee report by S. S. Selig, The Selig Co., Atlanta.

Report of the Nominating Committee.

Tuesday Afternoon:

"Social Security Legislation and What It Means to Business"—Address, speaker to be announced.

"History and Development of Sanitation and Disinfection"—Address by Dr. Samuel C. Prescott, Dean of Science, Mass. Institute of Technology, Cambridge, Mass.

Report of the Councillor to the U. S. Chamber of Commerce—Dr. Robert C. White, Philadelphia.

Election of Officers.

Unfinished Business.

Tuesday Evening:

Annual informal banquet with floor show.

MAKE RESERVATIONS NOW!

Members of the National Association of Insecticide & Disinfectant Manufacturers are advised to make their reservations NOW direct with the Waldorf-Astoria Hotel, New York, for the 22nd annual meeting to be held December 9 and 10. Plan now to arrive in New York on December 8.

Insecticides, disinfectants, and similar chemical products are manufactured in Rumania by several concerns, the most important of which is "Stabilimentele Industriale Moskovits" of Oradea. Since the introduction of import and payment restrictions a new impetus has been given to the local industry to increase its quota of the total consumption, but while efforts in this direction have not been slackened, the quality of local preparations, generally poorer than that of imported chemical products, is a serious obstacle to such increase. Household insecticides, disinfectants, and allied products are handled in Rumania by wholesale druggists, and are distributed to the retail trade mainly by drug stores, and to a lesser extent by grocery shops. Domestic and foreign manufacturers generally grant to a local wholesaler exclusive rights of representation for all of Rumania. The present internal consumption of insecticides, fungicides, disinfectants and kindred products, is estimated at about 500 metric tons yearly, the share of the local industry therein being about 150 metric tons.

Plans are rapidly getting under way for the Sixth Annual Packaging Exposition which will be held at the Hotel Pennsylvania, March 3 to 6, inclusive, according to an announcement made by Alvin E. Dodd, managing director of the American Management Association, which will sponsor the exposition. The packaging conference and exposition council which has been formed, includes T. K. Almroth, advertising manager, Owens-Illinois Glass Co.; S. L. Barnes, manager, cap department, Armstrong Cork Products Co.; F. C. Chase, assistant superintendent, E. R. Squibb & Sons; H. A. Goodwin, advertising manager, Continental Can Co.; R. W. Lahey, production department, American Cyanamid Co.; and J. H. Macleod, vice-president in charge of sales, Hinde & Dauch Paper Co. Among those who have already reserved space for exhibits at the Exposition are: Continental Can Co., Hinde & Dauch Paper Co., Owens-Illinois Glass Co., Package Machinery Co., Stokes & Smith Co., Wilson & Bennett Mfg. Co., and Hercules Powder Co.

A disinfectant solution, containing mercuric chloride as its essential ingredient has recently been perfected by Drs. Lloyd Arnold and J. A. Vachulis of the University of Illinois, Department of Bacteriology and Public Health. The new product contains 50 per cent alcohol and various quantities of acetone, mercuric chloride, hydrochloric acid, chrysoidin Y and water. It is said to have a phenol coefficient of 350.



Ewing Galloway.

SHEEP DIPS

By HAROLD SILMAN

London, England

THE treatment of sheep with a view to preventing the development and spread of diseases due to the presence of parasites is nowadays the subject of state legislation in most parts of the world. Such legislation is essential in order to prevent great losses and damage to livestock. The parasites chiefly responsible for most of the trouble experienced with sheep are the scab (*Psoroptis communis*) and the tick (*Ixodes reduvius*) besides several others. The various parasites differ considerably in their life histories, but as far as sheep are concerned, they all have the property of piercing the skin of their host and obtaining their food from the blood. The result of these piercing and burrowing processes on the part of the mites is that intense irritation is set up and the sheep affected become restless and rub constantly against posts or against other members of the flock, particularly after they have been driven, the irritation being more intense when the animal is overheated.

The sheep scab is so-called because of the scabs which are set up where the mite has burrowed. Further gene-

rations of mites make their home near the edge of the scabs, thus increasing their area. The effect is to cause the wool to fall away from the affected areas, and even when the wool does not actually come out it becomes matted and of a dead white color.

Various methods of killing the parasites have been adopted at different times, the earliest being in the form of ointments, but nowadays sheep are dipped into baths containing appropriate chemicals. The eggs of the parasites cannot be readily destroyed, being comparatively resistant, so that the usual procedure is to dip the sheep in the solution, (covering the head and ears) for about a minute, so as to kill the fully developed mites, and then using a second bath later when the remaining larvae have hatched out. The sheep scab has an average life of about 15 days, and when the eggs are laid (about 20 eggs being deposited by each female) the female dies and the eggs hatch out into larvae in 3 to 6 days, becoming fully matured mites about 4 days afterwards. Keds and sheep ticks go through similar stages of development. Keds

produce about 6 to 8 pupae which hatch on the body of the sheep. The sheep tick is more prolific and lays over 100 to 150 eggs on the pasture whence they are picked up by the sheep.

The materials used in the production of dips are comparatively limited in number, and consist chiefly of sulfur, arsenites, nicotine and phenolic bodies of various kinds. Their action consists in either blocking the respiratory and absorptive organs of the parasites or by direct toxic action upon them. Sulfur probably acts in the first-named manner, while the arsenites and phenols have a definite toxic action. Salts of copper used to have a certain vogue in the production of these dips owing to their toxicity but their use has gradually died out owing to the advent of better materials.

The arsenical dips are among those most largely used because of their high efficiency. Most governments nowadays have strict regulations regarding the dipping of sheep when scab makes its appearance in an area. Stringent regulations are also made regarding the disinfection of stables, pens, fences and objects with which the sheep come into contact in order to prevent the spread of the parasites to as yet uninfected regions. It is generally necessary, in countries like the U. S. A., Great Britain, and South Africa to submit any product which it is proposed to offer for sale to the appropriate government department for approval before it is allowed to be sold as a sheep dip. When approval has been given, the exact dilution at which the dip has to be used must be clearly marked on the label, and if arsenic is present, the fact must be stated separately on the package. An American Bureau of Animal Industry order specifically gives the phraseology in which labels must be worded.

In Great Britain it is a comparatively simple matter to obtain approval for a sheep dip. It is required to contain .36% tar acids and .76% tar oils. Many manufacturers obtain a wider use for their products by marketing dips of a phenolic type for use either as a sheep dip or a general disinfectant. One particular brand in the form of a small saponaceous tablet containing a high percentage of cresols enjoys a fair sale in urban localities for household cleaning purposes where sheep are never seen.

For the benefit of the farmer, and to induce him to keep his sheep in a hygienic condition, officially approved formulae for dips are widely published and instructions for their use are given in agricultural areas. The dips so recommended by the British and American governments do not contain any arsenic, the reason being given that they require careful use by an experienced operator in order to avoid danger of poisoning to humans. It is held by some authorities using such dips that arsenic may be absorbed through the skin and cause serious poisoning even if not taken by mouth. It is, of course, pointed out that this omission in no way reflects on the efficiency of arsenical dips.

The United States Bureau of Animal Industry gives a number of approved dips. A nicotine dip prepared by steeping tobacco waste in water is recommended and the solution should contain not less than .07% nicotine.

A cresol dip consists of a mixture of soap and cresylic acid (boiling between 185° C. and 250° C.) and should contain 0.5% of cresylic acid. A coal-tar creosote dip may be made by mixing coal-tar oils and cresylic acid separately with resin soap, and then adding the products to each other. The solution is diluted for use in such a way that it contains ultimately 1% of coal-tar oils and not more than 0.4% or less than 0.1% of cresylic acid. When the cresylic acid content is less than 0.2%, however, the creosote oil content must be increased until the total of oil and cresylic acid in the diluted dip is not less than 1.2%. In the use of this dip care must be taken to avoid the separation of naphthalene in cold weather as this will cause a change in the concentration of the dip. The use of excessively hard water in the dilution of the dip is also to be avoided as it is liable to cause separation of the oil at the surface by splitting the emulsion, thus impairing the efficiency of the bath.

THE British Ministry of Agriculture gives official cognizance to three dips. The first is made by steeping 35 lbs. of tobacco waste in 21 gallons of water for 4 days and adding 10 lbs. of flowers of sulfur to the liquor. This quantity makes 100 gallons. A carbolic dip may be made by gently warming 5 lbs. of good soft soap in 3 quarts of liquid carbolic acid containing not less than 97% tar acids, mixing the final product with water to make 100 gallons.

A sulfur-line bath is prepared by mixing 18 lbs. sulfur with 9 lbs. of good quicklime slaked with water and made into a paste with the sulfur. The whole is then placed in a strong cloth, the ends tied, and placed in a boiler containing 10 gallons of water so that the contents are completely covered, avoiding burning. After boiling for 2 hours the solids are thrown away and the liquor again made up to 10 gallons and stored in tightly closed drums. The quantity is sufficient for 100 gallons. It is doubtful whether a dip of this latter type would be as rapid in action as those containing toxic materials, but it might find good use in routine dipping for the prevention of infection.

The Government lays special stress on using the correct strengths for the various baths and special note is made of the fact that if a mixture of two dips is used it is essential that at least one of them must be present in the concentration approved by the Ministry. This consideration is important as the efficiency of dips is not additive. For example, by mixing a carbolic dip with an arsenite dip, the efficiency of each of them in destroying sheep parasites may be appreciably lessened.

Arsenical dips are made usually by dissolving ordinary white arsenic (arsenious oxide) in a solution of soda.

Caustic soda is sometimes employed. The following are the proportions for such baths.

(1)	
Arsenious oxide	2½ lbs.
Sodium carbonate	1¾ lbs.
Water	100 gallons
(2)	
Arsenious oxide	2½ lbs.
Caustic soda	½ lb.
Water	100 gallons

Flowers of sulfur is sometimes added to arsenite baths, in the proportion of 5 lbs. per 100 gallons, while sodium sulfide and other soluble sulfides have found application, although there is some controversy regarding their usefulness.

In the course of a very thorough investigation into the relative efficiencies of various arsenical dips, the Director of Veterinary Services for South Africa came to the conclusion that there is no useful purpose to be served by any addition to the straight arsenic dip and the expense of such addition is unwarranted. The most effective strength is .08% for a 3 day dip, and .16% for a 5 day dip, the latter being especially suitable for ticks. The correct strength is important inasmuch as too high a concentration of arsenic exerts a scalding action on the skin of the animal causing irritation and soreness. Watkins-Pitchford went so far as to say that arsenites when used in sufficient concentration to kill ticks scalded the sheep, and more dilute solutions were ineffective. He recommended the addition of paraffin or a soap emulsion to the more dilute arsenite solution, this then having a suitable lethal effect. The reason for this is probably due to the increased wetting power of the arsenite in the presence of an emulsion and therefore many types of sheep dips are emulsified products. Cooper and Laws state that the scalding effect is variable depending on the condition of the sheep and on climatic conditions.

IN spite of the conflicting evidence there is little doubt that when sheep are in a low condition it is inadvisable to give sheep two arsenical dips in succession. In England the prescribed period for the second dip is not less than 7 and not more than 14 days after the first. In this way it is expected that the second dip will destroy the larvae which were not destroyed at the first dip. The Ministry of Agriculture recommends that it is safer to use a non-arsenical bath for the second dip and for a time the use of arsenical second dips was actually prohibited. The risks involved in their use are not, however, particularly great in ordinary circumstances.

A copper-containing dip which is recommended by the South African Department makes use of copper sulfate and is compounded as follows:

Copper sulfate	3 lbs.
Arsenious oxide	2 lbs.
Hydrochloric acid	1.6 pints
Water	100 gallons

Arsenical dips appear to be, on the whole, effective against all classes of sheep parasites and have the great advantage of being without any deleterious effect on the wool. Phenolic dips also leave the wool in a good condition, but their concentration must be very carefully regulated to prevent skin irritation. The addition of emollients such as lanolin or glycerin to phenolic dips has advantages as it prevents too harsh an action on the skin. A formula which gave good results in the course of an official investigation consisted of a mixture of:

	Per Cent
Tar acids	29
Paraffin	36
Lanolin	8
Soft soap	17½
Water	9½

One gallon is added to 100 gallons of water.

In compounding dips it is important to avoid excessive free alkali. Thus, only the correct amount of soda which will react with the arsenic is to be used for arsenical dips and where soaps are used they should be neutral. This precaution is necessary because of harmful effect which free alkali has on the wool.

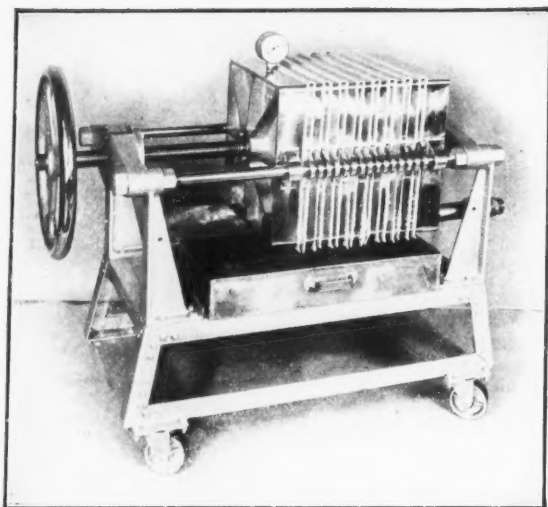
Most dips nowadays are emulsions of some kind in paste or fluid form, generally making use of refined tar oils together with soft soap or paraffin. The solution is made by heating the ingredients together in a boiler. Occasionally hard soaps are used with creosote oil or pine oil when a block or paste dip results. This is dissolved in hot water for use, and the solution can then be diluted as required to make a solution of appropriate strength.

IN preparing the emulsion, tests should be made regarding its permanence, the correct proportion of soap being important. A good emulsion, when shaken in a jar should run freely down the sides without sticking or forming globules and should have a bluish cast. When prepared in the diluted form the emulsion should remain stable for a good time without separation of oil. The materials used in the emulsification of tar oils also include, besides those named, resin soaps, castor oil soaps, and to a certain extent sulfonated oils and glues. In order to be effective, a very fine emulsion showing the Brownian movement is to be aimed at. Careful attention must be paid to the compounding of the various tar products to obtain the maximum efficiency, as here again a compound of several ingredient oils may be either more or less efficient than the respective oils separately. It is thus seen that much experimental work is necessary before a good tar oil sheep dip can be produced.

A high degree of fluidity in a dip facilitates dilution and gives a finer emulsion, so that if a high grade product is desired resin soaps are best avoided, potash-castor oil soaps then being among the best emulsifying agents.

A type of emulsifier which is becoming increasingly favored is gelatin, while other kinds of glues are also find-

(Turn to Page 117)



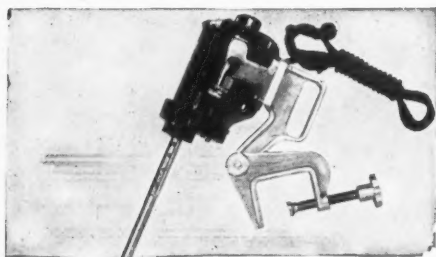
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Take out the heavier materials with an Erttel Pre-Filter . . . and give your polishing pads a chance. Eliminate that frequent changing of sheets and disks . . . to eliminate expense.

Know all there is to know about the Erttel Pre-Filter and you'll abandon the out-moded, slow methods in short order. Get the particulars.

This machine will also serve as an excellent filter where a high polish is not necessary.



- Erttel Portable Mixers . . . either direct driven or back geared. In all sizes. Easy to handle. Always ready to use in any part of your plant.

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BREUER'S TORNADO ELECTRIC SPRAYERS

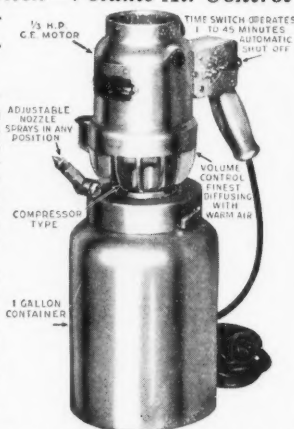
gets you readers because they are the most efficient and durable insecticide sprayers ever built. Supply your customers with the best.

The New Tornado Model 36 Automatic Time Switch—Volume Air Control One Gallon Capacity, 1-3 H.P. G. E. Universal Motor

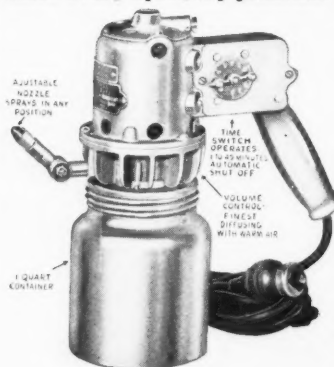
Here is the finest sprayer ever built. Similar to the now widely used Tornado Model 54 and retaining the automatic time switch, volume air control and adjustable nozzle features, the new Model 36 will spray a big volume of insecticide great distances in finest gas formation.

The patented principle of heating and compressing material does the trick. Just the sprayer you need for covering large distances and penetrating with the finest gas every possible source of insect existence.

Get the facts on this sprayer before buying!

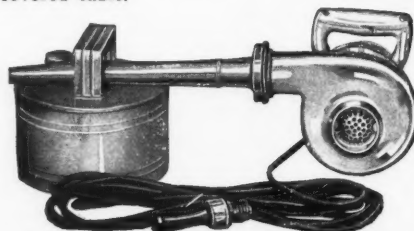
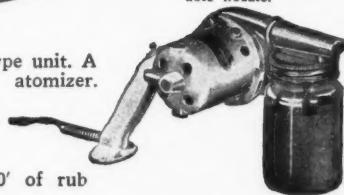


Also most complete line of electric sprayers to meet every spraying problem.



MODEL 54—
1 QT. CAPACITY
It features an automatic time switch set at any point from 1 to 45 minutes — sprays desired amount without any attention whatever — automatically shuts off. Can also be used for hand spraying. Adjustable nozzle can be set for spraying in any position. Also exclusive volume control adjustment permits spraying one ounce every two to four minutes with either fine or heavy spray. **MODEL 53** same as Model 54 except does not have automatic time switch or adjustable nozzle.

Model 50 Fan Type unit. A fine insecticide atomizer.
Sprays distance of 8' to 10'. 1/4 H.P. G.E. Universal Motor, 1 pint glass jar, 20' of rubber covered cable.



Model 6 Fan Type unit. Will break insecticide into a very fine mist. Sprays 18' to 20'. 1/3 H.P. G.E. Universal Motor. Norma Ball Bearings, 1 gallon metal container. This model is for larger institutions, warehouses, industrials, etc., and is also highly recommended for moth-proofing solutions. Write today for complete description and circulars.

BREUER ELECTRIC MFG. CO.

862 Blackhawk Street

Chicago, Ill.

We do not sell insecticides. Our business is manufacturing sprayers. Patented in U.S.A. and Foreign Countries

Exterminators Hold Annual Meeting

Over 200 Attend Detroit Convention—C. Norman Dold Elected President for 1935-36—Buettner, Secretary, and Steckel, Treasurer, Reelected—Table Motion on Exterminating Law—Hear Dr. T. E. Synder on Termites—Dr. C. L. Williams on Fumigation—Hold Exhibit of Exterminating Products

AN enthusiastic gathering of over 200 fumigators and exterminators attended the third annual convention of the National Association of Exterminators and Fumigators at the Statler Hotel, Detroit, on October 21, 22, and 23. Into the sessions of three busy days which were attended by representatives from all sections of the country, numerous addresses and discussions of great importance to the industry were crowded. At the close of the business sessions, C. Norman Dold, general manager of the Rose Exterminator Co., Chicago, was elected president for 1935-36. William O. Buettner of Oscar G. Buettner & Son, Brooklyn, N. Y. was reelected secretary, and H. K. Steckel of the Tornado Manufacturing Co., Columbus, O., was again chosen treasurer.

In addition to these officers the following were elected regional vice-presidents, serving their respective sections of the country: Martin Meyer, Theodore Meyer Estate, Philadelphia; Harry J. Hammond, W. P. Hammond & Son, Milwaukee; William A. Elliott, Orkin Exterminating Co., Brooklyn; Otto Orkin, Orkin Exterminating System, Atlanta; Jesse M. Miller, J. M. Miller Pest Control System, Hollywood, Calif. The following directors were elected for three years: Thomas C. Raley, Getz Exterminator Co., St. Louis; B. W. Eldredge, Waltham Chemical Co., Waltham, Mass.; Irving H. Josephson, Josephson Disinfecting Co., New York; John P. Linn, Industrial Fumigating Co., Omaha; C. Russell Lee, The Crusader Co., Detroit; Joseph Mandelbaum, United Chemical Co., New Orleans; W. F. Smith, The Alderman Co., Pasadena, Calif.

Numerous papers and discussions of wide interest were heard. A heated discussion of the advisability of the national association going on record as favoring some definite legislation in every state to regulate and restrict exterminating and fumigating, resulted in a motion being offered to this effect. Several substitute motions and amendments on the same subject followed. After a rather lengthy debate in which those who favored the recommendation of definite legislation were about evenly divided with those who opposed any legislative restrictions at this time, a close vote resulted in tabling the entire discussion and the original motion favoring recommended legislation.

The subject of ethics, cut prices, questionable practices, and others came in for considerable discussion.



C. Norman Dold



William O. Buettner

Among the prominent speakers were Dr. Thomas E. Snyder, Senior Entomologist, U. S. Department of Agriculture, the well-known termite authority, who spoke on "Termite Research in the United States." Another speaker on practical termite problems was George N. Uhler of the Antimite Co., St. Louis. Dr. C. L. Senior Surgeon, U. S. Public Health Service, spoke on "Fumigation." Other speakers on fumigants and fumigation included Dr. George Chapman, American Cyanamid & Chemical Co.; Conrad C. Johnson, Innis, Speiden & Co., New York; J. C. Pickard, E. I. du Pont de Nemours & Co., Wilmington.

In a session given over to "House Pests," Dr. R. C. Roark in charge of Insecticide Investigations of the U. S. Department of Agriculture, spoke on pyrethrum and derris. Dr. Alfred Weed of John Powell & Co., New York, asked and answered a series of questions on insecticide and exterminating materials. F. Gardner Lagg, chief sanitary engineer of the Detroit Board of Health spoke on the control of commercial fumigating and exterminating. M. G. Jorgenson of the Jorgenson Co., Los Angeles, discussed the subject of "Rats."

The general convention arrangements were in charge of C. Norman Dold assisted by R. B. Loibl, J. L. Howell, William Buettner, William A. Elliott, C. Russell Lee, Woodruff C. Cram, and M. R. Van Auken, treasurer of the committee. Exhibits and the program were in charge of J. N. Seidman, chairman, G. York Heystek, and Alfred Goulet. A large room adjoining the meeting hall contained 24 exhibits of products and equipment.

Five rules of ethics, recommended by the committee on ethics, headed by J. M. Miller of Los Angeles, were adopted at the meeting as follows:

"Relation of Exterminator to Customer": The Exterminator and/or Fumigator, recognizing his obligation to the Public, shall thoroughly analyze the service requirements of his customers, and shall

HUDSON SPRAYERS

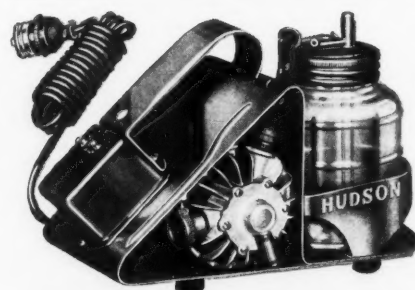
AND NOW--- FOR WINTER!

The New HUDSON Model 300 Electric Sprayer

Hudson has helped to solve the big problem of cleaning out roaches, water bugs and other hardy winter vermin. This new electric sprayer gives you the next best thing to complete fumigation.

The new Hudson Model 300 produces the perfectly atomized mist or dry spray that penetrates every crack and crevice of the room. It kills insect pests so that they stay killed—yet it does not leave a coating of film. The sturdy 1/10-HP electric motor with in-built compressor unit operates on both alternating and direct current. The motor time switch may be set for any period of spraying up to 30 minutes, after which it stops. It's a big feature for stores, food shops, etc., in automatic spraying after business hours.

There's a ready-made market for the new Model 300 wherever you sell insecticides among stores, institutions, etc. It's neat, light, compact, modern in design, easily carried. Ask for complete details and prices.



"A Hudson Sprayer for Everybody—Everywhere"

H. D. HUDSON MANUFACTURING COMPANY
589 E. ILLINOIS STREET :: CHICAGO, ILLINOIS

CIN-MADE CONTAINERS

Makers of all kinds of insecticides, cleansers, soap powders, deodorants, paradichlorobenzene blocks and crystals, and many other similar products use CIN-MADE cylindrical fibre containers. From a wide variety of styles, sizes and colors there is a CIN-MADE container to meet your individual requirement. A large stock of all standard sizes is always carried in stock enabling us to offer 24 hours' service on rush orders. Prompt service on special sizes.

A FEW CIN-MADE STARS

1. Single holders for para blocks.
2. Special single holder with diamond cut holes and duo finish.
3. Multi-type container for para blocks.
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"Criticism of a Competitor": An Exterminator and/or Fumigator shall not advertise for the purpose of deceiving the Public, or advertise free service in any form or manner, but shall foster honest publicity of the facts, aims, and progress of his profession.

The convention closed on Oct. 23 with the annual banquet at the Statler Hotel. J. M. Miller acted as toastmaster. Among the speakers was the retiring president, Thomas C. Raley of St. Louis, to whom a handsome travelling bag was presented by the association. William O. Buettner presented the bag and also spoke briefly. C. Norman Dold, the president-elect, also spoke and introduced his official family for the coming year. Dr. Galen S. Ross, the speaker of the evening, offered a miscellaneous assortment of ideas in his address, becoming slightly political and damning rum, taxes, communists, and others in the course of his diatribe. At its finish, he received some feeble applause admixed with some rather loud boos,—all of which helped to enliven an already lively occasion.

Sidelights of the Meeting

The fourth annual convention of the National Association of Exterminators and Fumigators will be held in Cleveland in 1936,—hotel to be selected.

The address of Secretary Buettner at the banquet was spaced with a few stories which it is reputed were told to him by members of his Sunday-school class back in Brooklyn. He received more laughs than the professional speaker who was supposed to make the people laugh.

Somebody at the banquet said that the main speaker was a stooge for H. Ford, Detroit auto manufacturer.

Norman Dold,—as *Time* would say it,—Chicago's Norman Dold, smooth, handsome, able,—was the essence of dignity and decorum as he addressed the assembled throng.

It was rumored about the meeting that the Arnotts of Indianapolis, the McKennas of Cleveland, the McClouds of Buffalo, and some others spent each night roaming about Detroit checking up on prices for roach jobs on dog wagons and blind pigs, and investigating prices of whiskey sours.

One J. Mandelbaum of New Orleans won for himself the title of Huey Long II. His one-man filibuster to send the 1936 meeting to New Orleans was a masterpiece.

After the exhibits were closed up at the end of the meeting, E. F. Sennewald distributed his exhibit in the form of various and sundry samples of blue, green, red, and purple mouse seeds. Somebody suggested serving them at the banquet because they looked so appetizing.

For its attendance mark at the 1936 meeting in Cleveland next year, the committee has set 400, or bust. Some bust!





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Household Insecticides

By DR. R. C. ROARK*

Division Insecticide Investigations, U. S. Department Agriculture

HOUSEHOLD pests include flies, fleas, mosquitoes, gnats, roaches, bedbugs, silverfish, ants, termites, clothes moths, carpet beetles, and other insects. The damage done by these enemies of man is enormous, amounting in the United States to not less than \$200,000,000 annually. Clothes moths and other fabric pests are estimated to cause a loss of \$100,000,000 each year; termites undermine wooden houses, flies carry the germs of typhoid fever; one species of mosquito transmits malaria and another species transmits yellow fever; spotted fever may result from the bite of a tick; and many insects other than those mentioned are suspected to be responsible for the spread of man's worst diseases. The work of exterminating these pests—which is the work of the members of this Association—is therefore one of great importance from the standpoint of protecting the public health and also from the standpoint of safeguarding our clothing, our food, and our homes.

That insects are enemies of man is not fully realized by the public. Dr. Howard has said: "It is difficult to understand the long-time comparative indifference of the human species to the insect danger. . . . Men and nations have always struggled among themselves. But . . . there is a war, not among human beings, but between all humanity and certain forces that are arrayed against it. Man . . . has subdued or turned to his own use nearly all kinds of living creatures. There are still remaining, however, the bacteria and protozoa that cause disease and the enormous forces of injurious insects which attack him from every point and which constitute today his greatest rivals in the control of nature. . . . If human beings are to continue to exist, they must first gain mastery over insects. . . . Insects in this country continually nullify the labor of one million men. Insects are better equipped to occupy the earth than are humans, having been on the earth for fifty million years, while the human race is but five hundred thousand years old."

According to Forbes:

"The struggle between man and insects began long before the dawn of civilization, has continued without cessation to the present time, and will continue, no doubt, as long as the human race endures. It is due to the fact that both men and certain insect species constantly want the same things at the same time. Its intensity is owing to the vital importance to both, of the things they struggle for, and its long continuance is due to the fact that the contestants are so equally matched. We commonly think of

ourselves as the lords and conquerors of nature, but insects had thoroughly mastered the world and taken full possession of it long before man began the attempt. They had consequently, all the advantage of a possession of the field when the contest began, and they have disputed every step of our invasion of their original domain so persistently and so successfully that we can even yet scarcely flatter ourselves that we have gained any very important advantage over them. Here and there a truce has been declared, a treaty made, and even a partnership established, advantageous to both parties of the contract—as with the bees and silkworms, for example; but wherever their interests and ours are diametrically opposed, the war still goes on and on and neither side can claim a final victory. If they want our crops they still help themselves to them. If they wish the blood of our domestic animals, they pump it out of the veins of our cattle and our horses at their leisure and under our very eyes. If they choose to take up their abode with us we can not wholly keep them out of the houses we live in. We can not even protect our very persons from their annoying and pestiferous attacks, and since the world began we have never yet exterminated—we probably never shall exterminate—so much as a single insect species. They have, in fact, inflicted upon us for ages the most serious evils without our even knowing it."

For fighting insects, use is made of chemical poisons called insecticides. Many of the most commonly employed insecticides of today were in use centuries ago. Prominent among these are the fumes of burning sulphur (sulphur dioxide) and arsenic. In 1726 Bradley in his "Country Gentleman and Farmer's Monthly Director" gave the following directions: "Destroy wasp nests by burning them or smothering them by putting lighted brimstone rags into their holes and stopping them up."

The use of cypress and cedar woods for making chests for protecting clothing is mentioned by Hale (A Compleat Body of Husbandry) in 1758. He says: "Cypress is excellent for chests for keeping of cloaths, moths never coming near it" and ". . . cedar preserves also what is kept in the chests made of it; no moth or mischievous insect ever coming into them."

Arsenic as an insecticide is mentioned in 1669 by Worlidge (System Agriculturae, The Mystery of Husbandry Discovered). For combating the ants Horlidge states: "Also you may make boxes of Cards or Pasteboard pierced full of holes with a bodkin, into which boxes put the powder of Arsenick mingled with a little Honey, hang these boxes on the Tree, and they will destroy

* Address before the third annual meeting National Assn. Exterminators and Fumigators, Detroit, Oct., 1935.



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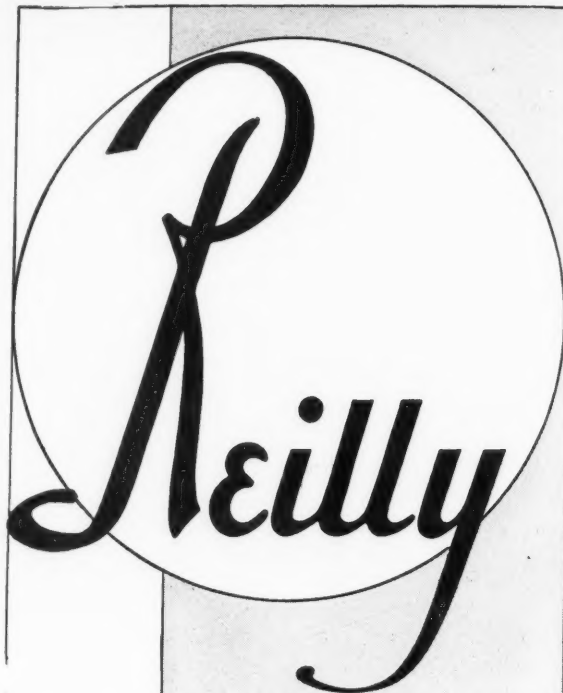
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them, make not the holes so large that a Bee may not enter lest it destroy them." This formula appears to be the prototype of the Barber ant formula used against the Argentine ant.

Measures advocated by Worlidge against gnats and flies include the following: "To keep the Windows of your Chambers close in the Summer time, especially towards the evening, is a good prevention." . . . "To burn straw and such like up and down in the Chamber, in the evening before you go to bed will destroy them; for either they will fly to the flame, and be consumed, or else the smoak will choke them." . . . "Ashen-leaves hanged up in the Room will attract them unto it, that you will be the less troubled with them." . . . "The balls of Horse-dung laid in the Room will do the same, if they are new."

THE principal insecticides at present employed against household pests include: hydrocyanic acid, ethylene dichloride, ethylene oxide-carbon dioxide, methyl formate-carbon dioxide, paradichlorobenzene, naphthalene, elemental phosphorus, sodium fluoride, certain fluosilicates, pyrethrum, derris and cube.

Satisfactory statistics of household insecticides are lacking and the following figures are the best available:

*Consumption as an
Insecticide in the
U. S. in 1934*

	<i>pounds</i>
Naphthalene	16,500,000
Paradichlorobenzene	5,000,000
Pyrethrum	10,000,000
Derris	1,000,000
Cube	500,000
Sodium fluoride	4,000,000
Kerosene	10,000,000

The value of all insecticides produced in the United States is reckoned at \$20,000,000 annually. This includes agricultural insecticides such as the arsenicals, sulphur and copper preparations and mineral oil emulsions. The retail value of fly sprays, which are used mostly in households, has been estimated at \$14,000,000 annually.

The failure on the part of the public to realize that insects are enemies of man and not merely petty annoyers retards the use of insecticides and restricts the business of insecticide manufacturers as well as that of exterminators. Gradually, however, people are becoming educated to the menace of permitting insects to enter their homes and as the public becomes more insect conscious, we may expect a greatly increased demand for insecticides, apparatus for distributing them and skilled operators to apply them.

According to a notice in the press of August 5, chemists of the E. I. du Pont de Nemours and Co. predict a great increase in the output of insecticides, namely an expansion from \$20,000,000 to \$150,000,000 a year. This expansion will accompany the development of new chemical materials to control insects. There is urgent need

for insecticides that are less poisonous to man and domestic animals than those now in use. Future developments will be along this line.

It seems appropriate, at this time, to call attention to that division of the Bureau of Entomology and Plant Quarantine whose function it is to develop new insecticides namely, the Division of Insecticide Investigations. These new insecticides are looked for among the constituents of plants, especially those plants that are toxic to fish, and also among products synthesized from coal tar, natural gas, petroleum or plant products. This division has taken a leading part in the development of rotenone and related insecticides derived from derris, cube and tephrosia, and in cooperation with the Federal entomologists was the first to bring ethylene oxide, ethylene dichloride, methyl formate, and other fumigants to the attention of the insecticide industry. At present a study of pyrethrum flowers is under way in an effort to devise a method of chemical assay of this material the results of which will check with those obtained by biological methods of evaluation. New organic compounds, especially compounds containing sulphur, are being synthesized and tested in order that there may be made available insecticides which meet the requirement of toxicity to insects and relative nontoxicity to man.

As an example of what may be expected from research to develop new insecticides that are highly potent in killing insects and yet harmless to mammals when eaten by them, we may cite phenothiazine, an organic insecticide developed by the Bureau of Entomology and Plant Quarantine.

This is a yellow powder resembling sulphur. It is insoluble in water and may be dusted or sprayed just as lead arsenate is. It is readily made at a reasonable cost. Phenothiazine is even more toxic than rotenone when tested against mosquito larvae and field tests for two summers indicate that it has good possibilities as a substitute for lead arsenate for combating the codling moth.

Phenothiazine has not yet been adequately tested against household pests but should prove effective against some of them. Pharmacologists who have been feeding phenothiazine to experimental animals believe that there is no danger from eating fruit or vegetables sprayed with this insecticide. The many uses to which a potent insecticide, harmless to humans, can be put in fighting household pests are apparent to you as professional exterminators.

AT present we have two outstanding insecticides that are relatively free from hazard to man. These are pyrethrum flowers, imported from Japan and Yugoslavia, and derris roots, imported from Singapore, Sumatra, Java and Borneo. Pyrethrum is an old insecticide but its use has increased very rapidly in the last ten years following the development of the kerosene-pyrethrum fly spray. Derris also is not a new insecticide (having been used in 1848 for killing caterpillars on trees), but only

(Turn to Page 117)



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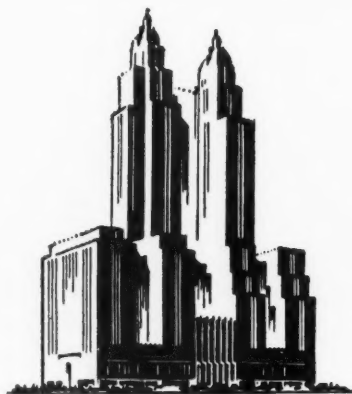
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Chlorpicrin in Modern Fumigation

By CONRAD C. JOHNSON*

Innis, Speiden & Co.

MANY a business has gone on the rocks because overhead has eaten up what should have been profit, and on the other hand many a business has been highly profitable because overhead has been studied and kept to a minimum.

The business of the modern fumigator is no exception. Labor and other overhead costs are often the difference between profit and loss.

Bringing this thought down to cases, some fumigants require a much higher proportion of labor than others, and with some the necessary equipment and its handling more than offsets some saving in material cost. Also on a busy day, a fumigant that permits twice the number of jobs (because of less labor) with the regular force, adds a real dollars-and-cents profit.

For instance, for the average home fumigation job there is a fumigant which requires only a gallon jug of this liquid, a sprinkler bottle or sprayer, and a gas mask. In some cases, this list might be increased by a half dozen flat biscuit pans, and as many burlap sacks. Naturally this means easier transportation and faster work. With this material, a man in a passenger car can handle two home fumigation jobs to one with most other fumigants.

This fumigant, as you may have guessed, is chlorpicrin. It is a volatile liquid that assumes the gas form and is handled in a manner quite similar to water or carbon tetrachloride. Because of its very high toxicity, only a little over a half-pint is necessary in home fumigation work for 1,000 cubic feet. This usual concentration is generally spoken of as 1 lb. per 1,000 cubic feet of space. No acids or other chemicals are used.

The object of any application method with this liquid is to break it up into as small drops as possible consistent with ease of application in the job to be done. For instance, if a bedbug job is desired in six or eight hours, some type of sprayer equipment will be used such as a Tornado Blower, a hand-compressor sprayer, or even an ordinary double action hand sprayer. Large blowers will atomize about a gallon of liquid, or 13 lbs. in 3 minutes. Sprayers of the hand-compressor type will break up the liquid into mist and fine drops at the rate of 2 lbs. per minute.

Rodent Fumigation

RODENT fumigation has been outstandingly successful with chlorpicrin because of the thoroughness of the job, ease of application and absence of nuisance from the carcasses. In gas form, chlorpicrin is over five times heavier than air, and hence finds no difficulty in working its way downward into burrows, and to bottoms

of piles. The irritating effect drives the rodents out into the open spaces for air in the same manner that a person would flee from a closet if someone threw a cupful of this tear gas material at him. Carcasses are found in the open or around exits, but never between floors or partitions.

Even at the low rodent concentrations, the rats and mice have to be exposed for only 2 or 3 minutes. Chlorpicrin is not a quick killer at these concentrations, and the rodent has ample time to remove itself from a burrow or hiding place. A general fumigation for rodents requires only $\frac{1}{4}$ of a pound of chlorpicrin per 1,000 cubic feet of space. Thus a pint is ample for 7,000 cubic feet. It is applied by sprinkling or spraying, with special attention to burrows and other hiding places. Control work, on the other hand, requires only about $\frac{1}{2}$ ounce with a sprinkler bottle down each burrow, and a light sprinkling in runways. A burrow that has had such light application will maintain a small lingering tear gas effect for months, which makes it untenable for rodents during that time.

Industrial Fumigation

BOX car fumigation is easy too. As with all other types of fumigation work, results even with chlorpicrin are dependent upon the tightness of the seal. For good results in box car fumigation of sacked or packaged products, 8 or 10 pounds of chlorpicrin are required in good steel cars for the best penetration, but 4 or 5 pounds can be used to do an excellent job of cleaning up surface infestation. For empty box cars, a quart is sufficient. A hand compressor sprayer or a sprinkling can will handle this small amount of liquid quickly.

Space fumigation on warehouse and similar industrial jobs is a matter of floor sprinkling with an ordinary sprinkler can at the rate of 1 lb. or a generous $\frac{1}{2}$ pint per 1,000 cubic feet of space. The floor area sprinkled is often covered with old empty sacks to prevent the liquid from sprinkling into the floor, and to assist aeration.

Another outstanding feature of chlorpicrin is its toxicity to egg life, as well as the other stages. We agree with Dr. Cotton's viewpoint that in general eggs are no more difficult to kill than the other stages, but we point out that generally the kill of egg life is in direct proportion to the ability of the fumigant to penetrate in toxic quantities to reach the buried egg life.

Many references can be made to the laboratory tests on the toxicity of chlorpicrin to egg life of the clothes moth, confused flour beetle, and others, but the most con-

* Address before the third annual meeting, Natl. Assn. of Exterminators and Fumigators, Detroit, Oct., 1935.

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vincing testimony is results under practical fumigating conditions. For instance, flour mills have reported that chlorpicrin rids them of the mediterranean moth to stay rid for years, a result that would be utterly impossible without a very thorough devitalization of egg life. Incubation tests on infested grain fumigated in tight bins show practically no emergence even when samples are kept two and three times as long as the life cycle of the weevil. Cigar factories and leaf storage plants find that their case tobacco storage stays rid of the tobacco beetle until reinfestation occurs.

Action on the Insect

IT might be of interest to point out that the action of chlorpicrin on eggs and larvae is probably twofold. It not only kills through adsorption into the breeding apparatus, but also by literally burning the cell tissue. For instance, the larvae of the mediterranean flour moth is ordinarily white and soft, but after a chlorpicrin fumigation in mill machinery most of them are found to be stiff and actually brown. We believe that this double action also accounts for the success of chlorpicrin fumigations at temperatures lower than usually possible with other fumigants. A second factor in this action at lower temperatures is an adsorption lower than with many other fumigants.

Contrary to some past thinking, chlorpicrin produces its toxic effect quickly. For instance, the confused flour beetle is rated as one of the more resistant insects to this gas. The following table by the University of Minnesota gives the time to kill at 86° under various concentrations:

Concentration*	Time to Kill
1 lb.	13½ hours
2 lbs.	45 minutes
3 lbs.	25 minutes
4 lbs. **	16 minutes

* Pounds per 1,000 cubic feet.

** 4½ lbs. per 1,000 cubic feet is a 1% concentration.

Keeping in mind the toxicity to eggs and some other forms of buried insect life, it may now be in order to seek an explanation. Briefly, it is due to its penetrating power. As we pointed out previously, a good fumigant should be able to kill egg life if it reaches it.

Chlorpicrin's ability to kill buried egg and insect life is probably due to the fact that the minimum toxic concentration of the gas is far lower than for most fumigants, and that the great weight of the molecules enables the gas to push its way more easily into dense materials and displace the lighter air. Other factors in penetration are probably the slower diffusion and leakage of a heavy gas and chlorpicrin's lower adsorption.

Again turning to practical fumigation work for our results rather than to laboratory experiments, the penetrating power of chlorpicrin will accomplish the following penetration jobs in well sealed premises:

Case tobacco stacked even 20 feet high.

Warehouses or vaults piled with sacked seeds, rice, flour or screenings.

Floor cracks harboring moth larvae or eggs.

Stacks of Cotton Seed Meal with some dunnage or laths between layers.

Structural timbers to kill Powder Post Beetle.

Any accumulation of stock or webbing inside milling machinery.

The California Termite Commission has also established experimentally that chlorpicrin will diffuse itself through sections of telegraph poles infested with termites and kill all insects.

Chlorpicrin lends itself ideally to the extermination of Buffalo Moth because it will penetrate into floor cracks, packages of woolen and between the studding in walls. A concentration of about 1¼ lb. per 1,000 cubic feet and an exposure of 24 hours is used. The clothes moth is another insect for which it is highly desirable to make use of chlorpicrin's penetration.

The Safety Factors

CHLORPICRIN brings many unusual elements of safety to home and commercial fumigation work. Years ago it was established that it has no effect on textiles, colors, furs and wallpaper. Neither is there any effect on seed germination when correctly applied. The worst that can be said is that some highly polished metals may develop a surface tarnish under exceptionally damp conditions, or that varnish and shellac when touched by the liquid show the usual effects of water contact. The latter may usually be removed in the same fashion as water stains.

In fumigating with chlorpicrin, there is a much greater safety from fire hazard. Should a fire break out in premises under fumigation, the gas can be entered with the protection of a gas mask, to put out the fire. It has no flashpoint and is spoken of by the Underwriters Laboratories as being practically non-combustible and non-flammable.

One of the most important arguments in favor of chlorpicrin is its protection to human life. Even though it is one of the most powerful fumigating gases, it is considered physically impossible for the normal human being to remain willingly in contact with a sufficient concentration to do him any permanent injury. Chlorpicrin is one gas, and its warning characteristic is absolutely inseparable.

To give a concrete example of this safety factor, the minimum lethal concentration to dogs has been established as about 120 parts per million of air over a half-hour exposure. On the other hand, one of the Government Departments exposed their men to various concentrations and report that at 22 or 23 parts per million, the tear-gas effect forced all men to withdraw within two minutes.

A Health Commissioner in Michigan who has had a number of years' experience with chlorpicrin wrote us last Winter that he doubted whether anyone would be able to stay in sufficient chlorpicrin to cause damage to local tissues. In connection with bronchitis, the main possibility, he wrote that it could be caused by any chemical irritant, but in the case of chlorpicrin the ef-



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THERE are certain qualities that an insecticide base should have for best results. Prominent manufacturers who have tried the new Atlantic petroleum product, Ultrasene, have *proved* to themselves that it has all the qualities that make for effective, *salable* sprays. Atlantic Ultrasene is uniform and evaporates rapidly without leaving any oily residue. It has no kerosene odor. Ultrasene is more transparent than water in color. Because of these characteristics, fly sprays with Ultrasene as a carrier can be used where food is handled — in bakeries, hotels, markets, kitchens, groceries and restaurants.

The practical proof of Ultrasene's superiority has caused many manufacturers to use it exclusively in their insecticides. Upon request we will be glad to send you a liberal working sample for your own tests. Our technical staff is always prepared to answer questions and to help solve any problems that you may have. Write to The Atlantic Refining Company, Specialty Sales Department, 260 South Broad Street, Philadelphia, Pa.

ATLANTIC ULTRASENE

fects would be undoubtedly temporary and transitory. He did not believe that it could ever be the cause of influenza.

Modern gas masks of the full-face type give complete protection against the tear gas effect. No chlorpicrin passes through a canister in good condition, and when the canister begins to give out, our experience has been that a man has ten or fifteen minutes before the concentration coming through becomes bothersome.

It should also be brought out that chlorpicrin has germicidal and fungicidal properties. *B. Typhosus*, the bacteria used to determine the phenol coefficient of disinfectants, is killed by a saturated atmosphere of chlorpicrin in three hours. Many other bacteria have also been shown to be killed even in the dry spore form, as well as a number of fungus growths.

Those familiar with chlorpicrin know that, as with other gases, there is occasionally some difficulty in airing out under unfavorable ventilation conditions, but that the usual gas hazard is eliminated by the characteristic warning. Such a large proportion of fumigation accidents have occurred after aeration is supposed to be complete, that the value of this safety feature cannot be over-rated. Naturally, the terrific warning at fumigation concentrations absolutely prevents a person unprotected with a mask to enter premises under gas. The City of Detroit thinks so much of these safety features that their ordinance does not even require licenses or signs in connection with chlorpicrin fumigation.

In addition to the protection of the public, fumigators report that the operators themselves approach jobs without a feeling of danger.

Summarizing, the modern fumigator finds that—

(1) The use of chlorpicrin helps him show a profit by its labor-saving methods and lower overhead.

(2) Chlorpicrin's toxicity and penetration result in customer satisfaction and fewer re-does.

(3) Chlorpicrin's inseparable warning feature is protective to both operator and the public, and relieves the fumigator of nervous worry.

A program of rat extermination will get under way in Chicago shortly, financed by an expenditure of \$393,359 from Federal Works Progress Administration funds and a donation of \$27,954 from the Chicago Board of Health. The war on rats will be carried on in all sections of the city by an army of 554 men from the relief rolls, using red squill baits. In addition to the actual exterminating, there will be sanitary inspectors to educate the public on how to keep rats from feeding and breeding.

Midway Chemical Co., Chicago, has added a new polish to its line under the name of "Aero" polish.

Stone Chemical Exterminating Co., Chicago, is now at 1327 S. Michigan Ave.

TAR-ACID SOAPS

In England several brands of Lysol or tar acid soaps are sold. Four samples, purchased as Lysol soaps, were found to contain 5.6, 0.5, 1.2 and 1.6 per cent respectively, of Lysol. An attempt was made to determine what minimum per cent of Lysol in a soap justifies the use of the term. The British standard for Lysol itself is 50 per cent by volume of cresols. The usual dilution recommended for washing the hands is 1 per cent, and a half per cent is stated to have a disinfectant action on the skin. Therefore a Lysol soap might reasonably be expected to be one which in use results in a 1 per cent, or at least a half per cent solution of Lysol being applied to the skin. (In the U. S., Lysol Soap is a trade-marked brand sold only by Lehn & Fink, Inc., Bloomfield, N. J.—Ed. Note.)

The next thing was to make some sort of guess as to the usual strength of soap solution used in washing the hands. The experimenter took some soap and proceeded as if to wash his face and hands. He filled the wash basin with warm water, and taking a bar of soap, rubbed up a good lather for what appeared to be the time usually taken in this operation. An observer found it was 5 seconds. The lather formed was then transferred to a weighed dish and evaporated, and the amount of soap left determined. The experiment was repeated, with 10 seconds allowed for the lathering operation.

With 5 seconds' lathering, the total solids were 10.6 per cent, equivalent to a 15 per cent soap solution. With 10 seconds' lathering, the total solids amounted to 16.1 per cent, equivalent to a 23 per cent soap solution. This was the amount of soap in the lather on the hands, not that of the final wash water. On this basis it was decided that a good Lysol soap should contain not less than 4 per cent Lysol, (equal to 2 per cent cresols), or as an absolute minimum, 2 per cent Lysol. *Chemical Trade J.* 97, 286 (1935).

C. L. Connelly, sales representative for the Huntington Laboratories, Huntington, Ind., in the State of Missouri, was killed on Oct. 17 a few miles north of Columbia, Mo. when his car sideswiped a truck load of steel. He had been associated with Huntington Laboratories for the past five years and made his home at Columbia. He was buried at Wichita, Kas. Dale Kreigh has been appointed sales representative in Missouri for Huntington Laboratories to succeed Mr. Connelly.

W. O. Tuck, Jr., sales manager for Corona Chemical Co., insecticide subsidiary of the Pittsburgh Plate Glass Company, Milwaukee, died October 22, from injuries received in an automobile accident Oct. 19th.

"Mertoxal," a new development in surgical antiseptics, has been announced by McKesson & Robbins Research Laboratories, Bridgeport, Conn. It is available in glass containers in three different solutions.

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POWDER *and* EXTRACTS

Biologically tested for kill in our Peet-Grady laboratory. Your customers want killing power. Buy DI-BUG Products and insure your success. DI-BUG Pyrethrum Extracts are made with

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The scientific insecticide base free from kerosene odor. Uniform—175° F. flash — effective distillation range.

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Effect of Lead on Pyrethrum Extracts

Study of Deleterious Effects of Lead Cap Liners and Solder in Containers on Pyrethrum Fly Sprays

By LOUIS S. BAKE

Brier Lane Laboratories, Penns Grove, N. J.

LITTLE is found in the literature in reference to the reaction of metals upon petroleum extracts of pyrethrum, and such information as is found, is incomplete and unaccompanied by data. C. B. Gnadinger states, in his book, "*Pyrethrum Flowers*", page 171, that extracts stored in the presence of zinc or copper become greenish in color. He does not mention, or can the writer find any reference to the action of lead upon pyrethrum extracts. This investigation was made as the result of some trouble which we experienced this past season with our liquid pyrethrum insecticide.

About the middle of the summer it was noticed that in some of the cans of the insecticide which had been stored for ageing tests, the caps and the tops of the cans were covered with a varying amount of a white to yellow crystalline compound, and that is several cans the color of the insecticide had disappeared, leaving the extract colorless. In all, there was an almost colloidal precipitate which was apparently the same material found on the caps.

It was believed at first that this decomposition was due to either oxidation or hydrolysis, but tests indicated that this was not the case, as the extract was found to be practically water free, and the cans were shown to be air tight. The fact that samples which had been stored in glass bottles, stoppered only with corks, were found to be all right, also indicated that neither hydrolysis nor oxidation caused the trouble. In view of these tests it was fairly well indicated that the trouble was in the container rather than in the extract used.

Upon examination it was found that with the last shipment of cans, caps with lead liners, instead of tin, had been supplied. It was believed then that the lead in the liners was the cause of the trouble and tests were immediately started to determine whether or not this was true. A sample of extract containing 108 mg. of pyrethrins per 100 cc. was prepared and several 4 oz. glass oil sample bottles, into which had been placed test pieces of various metals, were filled, closed with cork stoppers and stored in the dark. The test pieces were $\frac{1}{4}$ " x 3" x $\frac{1}{32}$ ", and consisted of the following metals: lead; solder (50-50); tin; copper; aluminum; zinc; iron; nickel.

The action of lead and solder upon the extract was spectacular, the solutions being almost decolorized at the end of 14 days, with the formation of an amorphous solid, insoluble in the oil base. This solid material was filtered off, washed with petroleum ether and dried. It was light yellow in color and contained 26.0 per cent

lead, as determined by digesting with concentrated sulfuric acid and finally weighing as lead sulfate.

The samples of extract containing zinc and copper were distinctly greenish in color, more so in the case of copper, while the amount of precipitate formed was greater in the case of zinc. Extracts stored with tin, aluminum, iron and nickel were apparently unchanged. At the end of 14 days, at which time the extracts containing the lead and solder had become decolorized, the test pieces were removed, washed with petroleum ether, dried and weighed and the loss in weight determined. The results obtained are listed in Table 1.

TABLE 1
Effect of Metals on Extracts of Pyrethrum

	Time of storage days	Metal	Area of Strip, Sq. In.	Loss in Weight grams
No. 1	14	Lead	1.7	0.0160
No. 2	14	Solder	1.7	.0120
No. 3	14	Zinc	1.7	.0081
No. 4	14	Copper	1.7	.0060
No. 5	14	Nickel	1.7	none
No. 6	14	Tin	1.7	none
No. 7	14	Aluminum	1.7	none
No. 8	14	Iron	1.7	none

These results show the quantitative effect of lead, solder, zinc and copper upon the pyrethrum extract and indicate that Al, Sn, Ni, and Fe are without effect.

In order to determine whether or not the cans themselves were of satisfactory composition for the storage of the extracts, tests were made by filling the cans with the extract, capping them with tin-lined caps and ageing them. No reaction was apparent, indicating that the statement made by the manufacturers of the cans, that no solder could come in contact with the contents, was true. As a result of the above tests, all of the cans on the market, that were equipped with lead lined caps were recalled and replaced with cans having tin lined caps. To date no trouble has been encountered.

The results of this investigation recall to the writer's memory an incident that happened last year. A sample of concentrated extract of pyrethrum which had been requested from one of the largest manufacturers of extracts was found upon arrival to be very cloudy. Filtration did not remove the precipitate and the company supplying the extract was notified. They were surprised that the material was not clear and forwarded two additional samples, which were found to be in the same cloudy condition. As a consequence, these samples, which were in cans, were stored away and forgotten. Recently, after the information disclosed by this investigation was obtained, these cans were opened and the caps were found to be covered with a yellow crusty solid

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Pine Oil Disinfectants
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Liquid Floor Wax

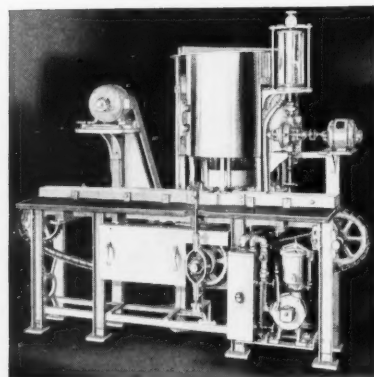
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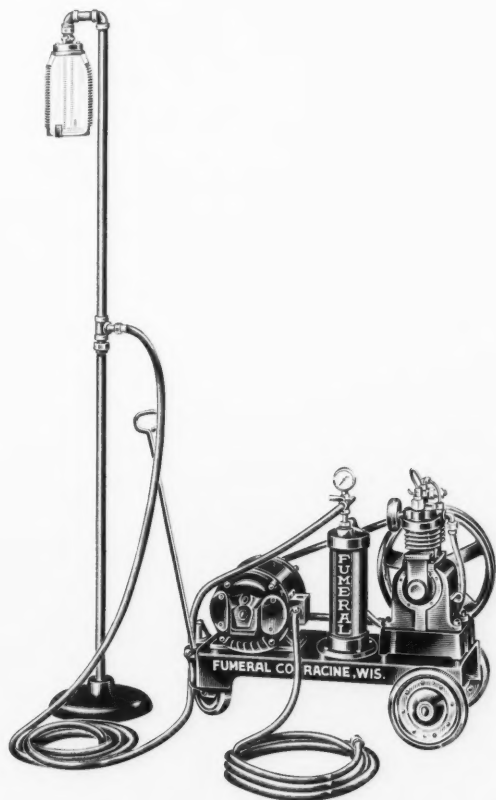
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and the concentrate was completely decolorized. Upon further examination the caps on the cans were found to be lead. This incident has led the writer to believe that the marked effect of lead upon the extracts of pyrethrum is not generally known by the trade.

Conclusions: It has been determined that lead and solder react very rapidly with the extracts of pyrethrum, decomposing the pyrethrins, and from this it has been concluded that these metals should not be present in any container used for the storage of these extracts. At the same time it has been determined that the extracts are apparently safe from decomposition when stored in the presence of tin, aluminum, iron and nickel.

Eugene R. Grasselli, vice-president and treasurer of Grasselli Chemical Co., Cleveland, for many years, died last month in Santa Barbara, Cal., at the age of sixty-three.



Fumeral Co., Racine, Wis., has introduced a new portable insecticide diffusing unit for use in warehouses, institutions, restaurants, and other places where no steam or air connections are available. These compact units are entirely automatic and run off the city light line. For the use of larger exterminating establishments, the Fumeral Company also furnishes large diffusing units mounted on standard trucks, driven by the truck engine, capable of operating a number of "Fumeral" diffusing stands and "Fumeral" high pressure hand sprayers simultaneously.

ANOTHER TEN-HOUR SESSION!

The 22nd annual meeting of the National Association of Insecticide & Disinfectant Manufacturers will comprise another "ten-hour session"—that is only five hours of meetings on each of two days,—an innovation introduced this year by President McCormick. December 9 and 10 at the Waldorf-Astoria, New York. Short, snappy sessions. Valuable discussions. Plan now to be present!

Tested as contact insecticides on bean and rose aphids, capric and lauric acids are more toxic than oleic, caprylic, myristic, caproic and palmitic acids, while stearic is least toxic. The decreasing order of toxicity of potassium soaps is: Oleate, laurate, caprate, followed by equally toxic caprylate, myristate and palmitate, which are more toxic than stearate and caproate. Olive-oil soap is more toxic than soaps made from coconut, castor, corn, palm, cottonseed or fish oil. L. E. Dills and H. Menusan, Jr. Contrib. Boyce Thompson Inst. 7, 63-82 (1935).

One of our readers is interested in locating the name of the maker of a product called "Terrazine." Any information regarding the product or its manufacturer will be appreciated and will be passed along by the publishers of SOAP to the party interested.

Williams Sealing Corp., Decatur, Ill., has declared a semi-annual dividend on its preferred stock, and according to the announcement of Carl McQuinn, president and general manager of the company, back dividends for the years 1933 and 1934 will also be paid. Following several years of unprofitable operation the company was reorganized late in 1932. It showed a profit of \$25,000 in 1934, and in the first nine months of 1935 net profit already exceeds the total for 1934.

Pyrethrum preparations are unconditionally superior to derris preparations in their effect when used in viniculture. Pyrethrum preparations are very sensitive to excess alkali. Only neutral soaps should be used with them. F. Stellwaag. *Weinbau u. Kellerwirtsch.* 13, 4-5, 14-16.

Monsanto Chemical Co. earned net profit of \$884,550 during the third quarter of 1935, equal to 89½¢ a share on the 987,876 shares of common stock outstanding. This compares with \$566,195, or 65½¢ a share for the corresponding quarter last year.

No-Kap Closures (U. S. A.) Inc., Providence, Rhode Island, manufacturers of a patented closure for collapsible tubes which replaces screw caps, have opened a New York office at 331 Madison Avenue. H. R. M. Gordon is their representative at this address.

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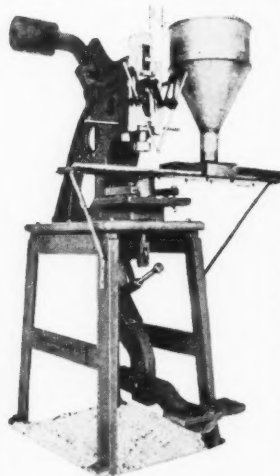
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HOUCHIN MACHINERY CO., INC.
HAWTHORNE, N. J.

NEW PATENTS

(From Page 47)

oil or fat, a soluble albuminoid, a soluble alkali sulphate, ammonium chloride, an alkali perborate, and a coal tar dye, the composition being adapted to tint silken and woolen fabrics when the composition is applied thereto in the presence of lukewarm water.

No. 2,014,676, Germicide, Patented September 17, 1935 by Lyle A. Weed, Iowa City, Iowa, assignor to The Hamilton Laboratories, Inc., Hamilton, Ohio. A germicidal preparation for use in suitable concentration in contact with tissue of a living human being or other higher animal for the purpose of combating the attack of pathogenic micro-organisms on the animal, without harming the animal, comprising an organic mercury compound having the formula $RHgX$, wherein R represents a phenyl radical carrying no substituent groups which will react with either alkalies or acids to form salts and wherein X represents an element or radical which exists as an anion when the compound is dissolved in water.

No. 2,015,533, Composition for Mothproofing, Patented September 24, 1935 by Richard M. Ritter, Elkins Park, Pa. A mothproofing composition comprising a substance selected from the group consisting of brucine anilide and its salts.

No. 2,013,028, Insecticidal Oil, Patented September 3, 1935 by Hyym E. Buc, Roselle, N. J., assignor to Standard Oil Development Company. An insecticidal preparation comprising a relatively non-volatile petroleum oil, insecticidal material selected from the group consisting of rotenone and rotenoids and a non-volatile highly halogenated hydrocarbon with a halogen content corresponding to not less than 25 per cent of chlorine.

No. 2,013,030, Organic Fluorine Compounds, Patented September 3, 1935 by William Standsfield Calcott and Anthony Francis Benning, Pennsgrove, N. J., assignors to E. I. du Pont de Nemours & Company, Wilmington, Del. In a process of producing organic fluorine compounds, the step which comprises reacting fluorine with an organic material in a liquid medium which is substantially inert to fluorine.

ORGANIZE SANITARY SUPPLY FIRM

Bulin & Co. with plant and offices at 29 to 39 Columbia Ave., Indianapolis, has been organized to manufacture disinfectants, germicides, insecticides, liquid soaps, floor products, and other sanitary specialties and detergents. Manufacturing operations are being started Nov. 15. J. M. Dulin, associated with the Continental Carnavar Corp. of Brazil, Ind. in the sales department for the past ten years, is one of the organizers. Louis E. Brunner, also associated with Continental Carnavar for the past ten years as chemist and factory superintendent, is the other member of the firm, who will be in charge of manufacturing operations. The firm will establish warehouse stocks in the principals of the country and will concentrate in selling their products to the jobbing trades.

ANSWERS RUZICKA ON PYRETHRUM

C. B. Gnadinger, chief chemist for McLaughlin, Gormley, King Co., Minneapolis, well-known exponent of the chemical methods for the evaluation of pyrethrum products, answers Dr. L. Ruzicka who in a recent interview criticized present chemical methods in use in the industry for determination of pyrethrins. The interview with Dr. Ruzicka, prominent European chemist, was published in the October issue of SOAP. In his letter, Mr. Gnadinger says:

"It is difficult to see how any good can be accomplished by the publication of the interview with Dr. L. Ruzicka in the October number of SOAP. If you have correctly quoted Dr. Ruzicka, such an interview, coming from a well known scientist, can only be characterized as "unscientific" and "dirty," to use his own terms. Dr. Ruzicka is known to users of pyrethrum for his work with Staudinger on the isolation and identification of the pyrethrins. This work was completed in 1916 and published in 1924. Dr. Ruzicka has thus had 19 years in which to develop a chemical method for assaying pyrethrum; to date he has not done so.

"In spite of Dr. Ruzicka's opinion, no fair-minded person will agree that the work of Staudinger and Harder, Tattersfield, Seil or Gnadinger and Corl has been scientifically useless. This work has all been based on the acid methods and copper reduction method which disturb the Doctor's scientific soul. Dr. Ruzicka's criticism that foreign materials can be added to simulate pyrethrins, thus rendering the methods inaccurate, is also true of a large proportion of the methods used in food and drug control work today; nevertheless, such methods are still in use, for lack of better ones. The method of Ripert, which Dr. Ruzicka partially indorses, is open to the same criticism and so is the method of Haller of the U. S. Department of Agriculture.

"One need only look back to the condition of the pyrethrum industry in 1928, before the methods now in use were developed, to see the progress that has been made, through the application of these chemical methods. Problems that have been solved by their use include:

- The relative value of open and closed flowers.
- The relative value of Dalmatian and Japanese flowers.
- The effect of storage, light, and heat on the pyrethrins.
- The distribution of pyrethrins in the flower head.
- The manufacture of standardized concentrates.
- The standardization of household extracts and horticultural sprays.
- The effect of antioxidants on pyrethrins.

"It is significant that one of the principal unsolved problems is the relative toxicity of the two pyrethrins, which must be determined by *biological* methods. Those familiar with the industry know that its whole character has changed since 1928. When Dr. Ruzicka has developed a better chemical method than those now in use, I am sure everyone in the industry, including the writer, will welcome it."



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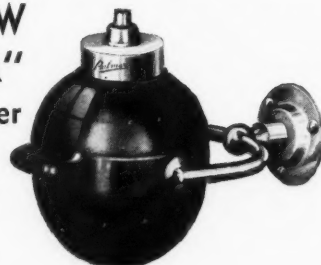
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At last an economical, positive-serving powder dispenser—with no mechanical parts to get out of order, no springs to cause trouble.

Positive in operation—impossible to become clogged. Patented dispensing device of pleasing design—yet simple and entirely practical. No metal bands, cracks or crevices to gather dirt or germs. Wiped clean as easily as a dish—and is tamper proof.

Tilting of dispenser permits pre-determined quantity of soap to flow smoothly and steadily—yet a wasteful continuous flow of soap is *absolutely impossible*.

All metal parts chrome plated—choice of black china, opal china, or clear, crystal glass bowls.

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Write for new illustrated catalog describing complete Palmer line of soap dispensing equipment, janitor and sanitary supplies, maintenance materials and equipment.

HOUSEHOLD INSECTICIDES

(From Page 103)

in the last 5 years has it become well known and generally available in the United States. The possibilities and limitations of pyrethrum for insect control are pretty well known, although there remain uses to which it could be profitably applied. Derris, however, is still relatively new and profitable uses for it are found each new season.

Campbell, Sullivan and Jones of the Bureau of Entomology and Plant Quarantine have compared the value of extracts of pyrethrum and of derris as house fly sprays, and found that, pound for pound, a good sample of derris root yielded a kerosene extract of greater lethal potency than did a good sample of pyrethrum. They state: "Kerosene extracts of derris seem to be superior to those of pyrethrum in several respects:

"(1) A given weight of derris root is likely to yield a larger volume of effective kerosene extract than the same weight of pyrethrum flowers. Since the present cost per pound of the two ground plant materials is about the same, derris extracts should be the more economical. Further experiments are needed to determine the volume of effective extract that can be obtained from a unit weight of ground derris root in relation to its rotenone content and percentage of total extractives.

"(2) Where it is possible to sweep up and destroy flies knocked down by a spray, kerosene extracts of pyrethrum would probably give better control than those of derris, but where flies are not, or cannot be, collected and destroyed, kerosene extracts of derris, because of their persistent effect, should give better control.

"(3) Extracts of derris prepared with a colorless and almost odorless kerosene are practically colorless and odorless, whereas those of pyrethrum are deep yellow and when sprayed have the characteristic but not unpleasant pyrethrum odor. Sprays of kerosene extracts of derris, like those of pyrethrum, have no unpleasant or harmful effects on the operator.

"Kerosene extracts of pyrethrum have certain advantages over those of derris:

(1) Kerosene extracts of pyrethrum paralyze flies more rapidly and completely than do those of derris. The former thus give quicker relief and have a good psychological effect on users who expect immediate results. It is obvious that the best features of kerosene extracts of pyrethrum and of derris might be combined by mixing them."

This use of a mixture containing the active principles of pyrethrum flowers (namely, the pyrethrins) and rotenone is claimed in the United States patent 1,967,024 issued July 17, 1934 to S. C. Fulton, and assigned to Stanco, Inc.

Rotenone and extracts of rotenone-bearing plants (especially derris and cube) have given good results in combating bedbugs, roaches, and clothes moths. One of

the earliest commercial uses of derris was as an ingredient of a flea powder for pet dogs and today the best known flea powders contain derris extractives.

A recent trend in insecticide technology is the practice of mixing two or more insecticidal constituents to make a product that embodies the best features of each. The use of mixtures of rotenone with pyrethrins has been referred to. Recently mixtures of rotenone with certain aliphatic thiocyanates and of pyrethrins with these same thiocyanates have been prepared for use in fighting household insects. It is too early as yet to evaluate some of these combinations.

Summary

It has been shown that insects are enemies of man and that household insect pests do great damage to clothing and houses and also endanger our health. Great progress in insecticides used to fight these pests has been made in the past hundred years and even in the last ten years. Just now we are at the threshold of discoveries that will enable us to more effectively combat insects and at the same time avoid injury to man and domestic pets. The insecticides of the future will be chiefly organic compounds that are highly toxic to insects but relatively innocuous to warm-blooded animals. People must be taught that insects are enemies of man; and as the public becomes insect conscious the opportunities for service by the entomologist, the insecticide chemist, the chemical manufacturer and the exterminator will increase.

SHEEP DIPS

(From Page 95)

ing application. Their proper use as emulsifiers requires care and experience, and the resulting emulsion is light in color, or white, as opposed to the dark color of the saponaceous products. The cost of production is higher but such an emulsion will be stable when mixed with hard or salt waters, which renders them particularly suitable for use in the tropics. Furthermore it is actually an advantage to use them in the presence of salts as on physico-chemical principles this will facilitate the action of the phenolic bodies on the parasites.

It is always advisable to carry out actual tests on the parasites themselves before marketing a product, and due attention must also be paid to the stability of a preparation. Arsenites, for example, are oxidized by the atmosphere, while there are certain types of bacteria which thrive in arsenites and ultimately effect their destruction. For these reasons a number of preparations make use of the more stable arsenate, although this is inferior in its action. Packaging should in any case be air-tight as far as possible and should comply with local regulations as regards labelling. In certain regions labels and packages must first be submitted for official approval, and these and similar legal technicalities should be carefully looked into before a product is marketed.

Good REBUILT MACHINERY for SOAP MANUFACTURERS

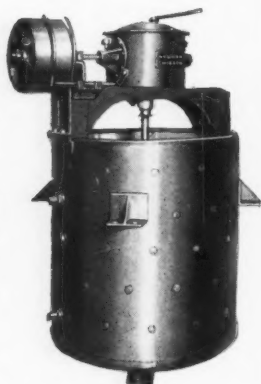
H-A 1500, 3000, 4000, 5000 lbs. capacity.
Steam Jacketed Crutchers.
Dopp Steam Jacketed Crutchers, 1000, 1200,
1500 lbs. and 800 gals. capacity.
Ralston Automatic Soap Presses.
Scouring Soap Presses.
2, 3, 4, 5 and 6 roll Granite Toilet Soap Mill.
H-A 4 and 5 roll Steel Mills.
H-A Automatic and Hand-Powered slabbers.
Proctor & Schwartz Bar Soap Dryers.
Blanchard No. 10-A and No. 14 Soap Powder
Mills.
J. H. Day Jaw Soap Crusher.
H-A 6, 8, and 10 inch Single Screw Plodders.
Allbright-Nell 10 inch Plodders.
Steel Soap frames, all sizes.
Steam Jacketed Soap Remelters.
Automatic Soap Wrapping Machines.
Glycerin Evaporators, Pumps.
Proctor & Schwartz large roll Soap Chip
Dryers complete.
Doll Steam Jacketed Soap Crutchers, 1000,
2000 and 1350 lbs. capacity.
Ralston and H-A Automatic Cutting Tables.
Soap Dies for Foot and Automatic Presses.
Broughton Soap Powder Mixers.
Williams Crutcher and Pulverizer.

Good REBUILT MACHINERY for Sanitary Product Manufacturers

Empire State, Dopp & Crosby Para Presses.
Filling and Weighting Machines for Flakes,
Powders, etc.
Sperry Cast Iron Square Filter Presses, 10,
12, 18, 24, 30 and 36 inch.
Perrin 18 inch Filter Press with Jacketed
Plates.
Gedge-Gray Mixers, 25 to 6000 lbs. capacity,
with and without Sifter Tops.
Day Grinding and Sifting Machinery.
Schultz-O'Neill Mills.
Day Pony Mixers.
Gardiner Sifter and Mixer.
Day Talcum Powder Mixers.
All types and sizes—Tanks and Kettles.
National Filling and Weighing Machines.

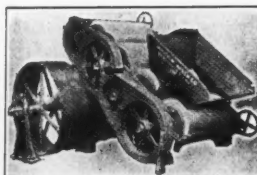
New SOAP CRUTCHERS

This Newman brand new, all steel steam jacketed soap crutcher. Will crutch any kind of soap. We also build another crutcher especially adapted for laundry soap in addition to other new soap machinery such as frames, cutting tables, etc. Send for complete list.

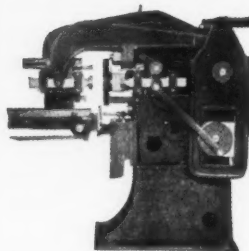


All used equipment rebuilt in our own shops and guaranteed first class condition.

Rebuilt Specials!



H-A SOAP MILL
This 4-roll granite toilet soap mill is in A-1 shape. Latest and largest size rolls.



**4 JONES
AUTOMATIC**
combination laundry and toilet soap presses. All complete and in perfect condition.

Send us a list of your surplus equipment—we buy separate units or complete plants.

NEWMAN TALLOW & SOAP MACHINERY COMPANY 1051 W. 35th St.
CHICAGO

Our Forty Years Soap Experience Can Help Solve Your Problems

CLASSIFIED ADVERTISING

Classified Advertising—All classified advertisements will be charged for at the rate of ten cents per word, \$2.00 minimum, except those of individuals seeking employment where the rate is five cents per word, \$1.00 minimum. Address all replies to Classified Advertisements with Box Number, care of *Soap*, 254 West 31st St., New York.

Positions Wanted

Sales Manager—Seven years personal sales promotion experience opening new accounts for national concern, metropolitan New York territory, selling soaps, powders and detergents to hotels, institutions, hospitals, restaurants. Large personal following. Self-starter. Giltedge references. Present employed. (Minimum Salary \$5,000). P. O. Box 34, Woodhaven, N. Y.

Sanitary Specialties Chemist—10 years' experience manufacturing all kinds of disinfectants, insecticides, soaps, detergents, deodorants, polishes, cleansers, etc., desires position as Superintendent or Assistant Superintendent of large plant. Employed, but available about November 15th. Age 42, single, B.S., 1920, C. I. T. Address Box No. 656, care *Soap*.

Soapmaker—Experienced in all phases of soap industry, seeks employment. Address Box No. 649, care *Soap*.

Soap—Formulas and Short Cuts, assistance in manufacturing difficulties offered by practical soap chemist with over 20 years' experience. Specialist in soap stock and powders, all kinds of potash soaps, shaving creams and shampoos. Address Box No. 651, care *Soap*.

Chemist and Soapmaker—experienced in manufacture of textile, laundry and toilet soaps, soap powder, glycerine recovery. Analyze all raw and finished material. Address Box No. 652, care *Soap*.

Chemist—Woman with a wide experience in the chemistry of soaps, textile oils and specialties, sulfonated oils, desires position in laboratory. Has pharmacy degree and previous experience in cosmetics and toilet preparations. Experienced in research, routine analysis, and factory control. Salary to start—\$25.00. Address Box No. 640, care *Soap*.

Soapmaker, full experience in the making of all soda and potash soaps. All references; 35 years of age. Received training in Europe. Wishes steady position. Address Box No. 658, care *Soap*.

F. & S.

Quality Colors for TOILET SOAPS LIQUID SOAPS TOILET PREPARATIONS

Long experience enables us to produce colors for all types of soaps.

If you have a shade you want matched send us a sample. We have complete facilities for matching.

Liquid soap colors a specialty—send for samples of F. & S. greens and ambers.

FEZANDIE & SPERRLE, Inc.

205 FULTON STREET
NEW YORK, N. Y.

Import—Manufacture—Export

NEW AND REBUILT SOAP MACHINERY

SPECIAL

1 Lot of 50, 1200-lb. Soap Frames in Excellent Condition.

- 1—Jones Automatic Type "A" Soap Press for toilet and laundry soap
- 3—3 and 5 Roll Steel Mills
- 1—10" Houchin-Aiken Plodder
- 1—Automatic Power Cutting Table
- 1—Broughton Mixer, jacketed
- 2—10A Blanchard Mills
- 3—Soap Presses, Foot and Power
- 6—Filter Presses, sizes 6" to 36"
- 6—Granite Stone Mills, 2, 3, and 4 rolls
- 2—Glycerine Evaporators, double and triple effect
- 4—Jacketed Vertical Crutchers
- 2—1,500 lb. Horizontal Crutchers
- 2—Hand Power Slabbers
- 2—Hand Power Cutting Tables
- 3—Houchin Chippers, Belt Driven
- 600 and 1,200 lb. Frames, Kettles, Pumps, Tanks, Filter Presses, Wrapping Machines, Tube Fillers, Closers, Crimpers, Dry Powder Mixers, Pulverizers, Grinders, Amalgamators, Mixers, etc.

Send for Complete List (Bulletin No. 15)

WE BUY AND SELL FROM SINGLE ITEMS TO COMPLETE PLANTS.

STEIN-BRILL CORPORATION

183 VARICK STREET

Phone:
Walker 5-6892-3-4

NEW YORK, N. Y.

Cable Address:
"BRISTEN"

JUST PURCHASED SOAP AND SOAP POWDER EQUIPMENT

From the plants of:
Pennsylvania Soap Co., Lancaster, Pa.
Barnes Soap Co., Brooklyn, N. Y.
National Soap Powder Wks., Paterson, N. J., and others

LOW PRICES FOR QUICK SALE

- 1—Proctor & Schwartz 5-section 5-fan all steel construction Soap Chip Dryer.
- 1—Proctor & Schwartz late type single Chilling Roll, 3'x5', with top feeder roll, ballbearing equipped, belt driven.
- 1—Albright-Nell 4'x8' Cooling Roll, with top feeder roll, scraper knife.
- 1—Proctor & Schwartz 5-roll Chilling Roll, 44"x66".

CRUTCHERS AND KETTLES

- 8—5000 lb., 3000 lb., 1500 lb., 1000 lb., 200 lb. jack, vert. Crutchers.
- 2—1500 lb. Cold Process Crutchers, 1—vert., 1—horiz.
- 30—Jack, Kettles, steel and cast iron, 200 lb. to 5000 lb., 40-gal., 80-gal., 175-gal., 400-gal., 600-gal.
- 1—Steel vertical Soap Kettle, 5' dia. x 10' high, 10,000 lb., dished bottom.

MIXERS

- 1—Houchin Amalgamator, all steel, 400 lb.
- 1—Gedge Gray 750 lb. horiz. jack. Mixer.
- 3—1200 lb., 1500 lb. Broughton horiz. Mixers, double shaft.
- 2—Robinson 4000 lb. jack. horiz. Mixers.
- 30—Day Dry Powder Mixers, 50 lb. to 2000 lb.

CUTTING TABLES

- 2—Houchin-Aiken 2-way Autom. Soap Cutting Tables.
- 6—Hand and foot operated Soap Cutting Tables, 1-way and 2-way.

SPECIALS—Located on Pacific Coast

- 1—Proctor & Schwartz SOAP CHIP DRYER, steel frame, 7-section, 1 cooling section, complete with 5-roll Proctor & Schwartz Mill.
- 2—Dopp 1200 lb. Steam Jack. SOAP CRUTCHERS.
- 2—Houchin-Aiken 8" Preliminary PLODDERS.
- 2—Houchin-Aiken 10" "Jumbo" Finishing PLODDERS.
- 1—Houchin twin screw 4½" PLODDER.

SLABBERS

- 2—Houchin-Aiken all steel Power Slabbers, 1200 lb., 1500 lb.

FOOT AND POWER PRESSES

- 12—Soap Foot Presses, Empire State, Hercules, Rutchmann, Crosby.
- 1—Jones No. 4 Automatic Power Press.
- 1—Jones Automatic Pin Die Press.
- 1—Ralston Automatic Power Press.

PLODDERS

- 1—Houchin-Aiken 12" single screw Plodder, silent chain drive.
- 3—Houchin "Jumbo" 10" Plodders.
- 4—Houchin 6" twin screw Plodders, 2-motor driven.

CRUSHERS AND MILLS

- 1—Blanchard No. 9 Preliminary Crusher.
- 1—Champion Preliminary Spiked Tooth Crusher.
- 4—Blanchard Mills, 10-A, 14.

GRANITE MILLS

- 2—Rutchmann 4-roll Inclined Granite Mills, 18"x24", direct motor driven with motors.
- 3—4-roll Houchin Granite Mills, 18"x30", belt driven.
- 2—Houchin 3-roll 12"x24" Granite Mills.
- 1—Lehman 3-roll Granite Mill, 15"x26".

CHIPPERS

- 1—30" Houchin 8-knife.
- 1—22" Houchin 6-knife.
- 2—20" Houchin 4-knife.
- 1—18" Houchin 6-knife.

SOAP FRAMES

- 200—Soap Framers, 200 lb. to 1500 lb.

SOAP PUMPS

- 2—Tabor Soap Pumps, 4"x4".
- 1—Worthington Duplex Soap Pump, steam driven.
- 2—2½" Hersey.
- 1—2" Rumsey.

FILTER PRESSES

- 2—Sperry 36"x36" recessed iron Filter Presses, each 36 plates.
- 1—Johnson 30"x30" center feed recessed Iron Filter Press, 50 chambers.
- 3—18" Recessed center feed Iron Filter Presses.
- 1—Johnson 14" corner feed Filter Press, 18 chambers.
- 8—Sperry 10"x10" plate and frame Filter Presses, 8 chambers.

MISCELLANEOUS

- 4—Raymond Pulverizers, beater type.
- 4—Holmes & Blanchard 4-cage Disintegrators, 20", 36", 42".
- 1—Garrigue Glycerine Evaporator, 4' dia.
- 6—Day and Ross Change Can Mixers, 2½-gal., 8-gal., 15-gal., 40-gal.
- 4—J. H. Day auger type Powder Filling Machines.
- 1—Stokes No. 15 Auger Type Powder Filling Machines.
- 1—Pfaudler 300-gallon jack, glass lined Mixing Kettle, motor driven, side agitator.

ALSO

Lard Rolls, Filters, Copper and Aluminum Kettles, Caustic and Lye Tanks, Wrapping Machines, Tube Filling and Closing equipment, Labeling Machines, Compressors, Boilers, etc.

SPECIAL

- 1—U. S. Automatic FILLING WEIGHING, and PACKAGING UNIT, complete with E. W. Bird CARTON FORMING and SEALING MACHINE.
- 1—Practically New Johnson AUTOMATIC PACKAGE SEALER, direct motor driven.

Send for Latest Printed Bulletin

CONSOLIDATED PRODUCTS CO., Inc.

15-21 Park Row, N. Y. C.  BARclay 7-0600

We buy your idle machinery—Send us a list

During the Chemical Show, December 2 to 7, be sure to visit us at our Suite at Hotel Lexington, opposite Grand Central Palace, Lexington Ave., and E. 48th St., N. Y. C.

Position Wanted—Responsible and thoroughly experienced soapmaker with chemical training desires new position. Familiar with modern manufacture of laundry and toilet soaps, liquid and soft soaps. Experienced in refining oils, fats and glycerine. Can make side lines such as floor products, disinfectants, insecticides, etc. Am forty years of age, educated in German technical schools. Address Box No. 641, care *Soap*.

Soapmaker and Superintendent—Have had long experience in making all kinds of soap. Analyze any soap or soap material. Address Box No. 653, care *Soap*.

Positions Open

Sales Director—By established Chicago manufacturer—F2½ rating. Must be dependable, experienced, and have personal following in field of soaps, disinfectants, etc. A permanent connection with interest in business open to right man. Company operating at profit but feels that now is the time to expand. Address Box No. 633, care *Soap*.

A Prominent Manufacturer of liquid soaps, disinfectants, deodorizing cakes, etc., has an opening for a dependable sales representative. Address Box No. 655, care *Soap*.

Wanted—Chemist between 25 and 30 years of age, graduate of good school, for plant connection with large company. Training for a year in this country with view of later transfer to foreign plant of company. Experience in soaps, insecticides, cosmetics, flavors, desirable. Give complete details. Address Box No. 645, care *Soap*.

Wanted—Salesman with some knowledge of soap making, capable developing business on toilet and laundry soaps under private label for a reputable manufacturer in Central Western territories. Applicant must know these outlets and be a good closer. Expenses paid. Drawing account against commissions. Address Box No. 647, care *Soap*.

Miscellaneous

Floor Brushes—We manufacture a very complete line. Catalogue sent upon request. Flour City Brush Company, Minneapolis, Minn., or Pacific Coast Brush Co., Los Angeles, Calif.

**Boiled-Down
COTTONSEED
SOAP**

**"MOPCO"
BRAND
65%**

New improvements now enable us to submit the above as the *best product* of its kind on the market.

If you will advise when next in the market we are certain that you will often find our *prices lower* and service more satisfactory.

We always carry large spot stocks ready for immediate deliveries.

MURRAY
OIL PRODUCTS CO.
INCORPORATED
21 WEST ST., NEW YORK



We manufacture a complete line of high quality waxes for the jobbing trade, including no-rubbing liquid wax, regular type liquid wax, powdered wax, paste wax and also furniture polish. These products can be supplied in bulk, packaged under the Windsor label or with your own label which we supply.

**WINDSOR
WAX COMPANY**
53 PARK PL. New York N.Y.

factory
611 Newark St. Hoboken N.J.

Manufacturers of
WAX PRODUCTS EXCLUSIVELY

MECHLING'S SILICATE OF SODA

ESTABLISHED 1869

MECHLING BROS. CHEMICAL COMPANY

PHILADELPHIA • CAMDEN, N.J. BOSTON, MASS.

What is the Best Concentration for a LIQUID SOAP?

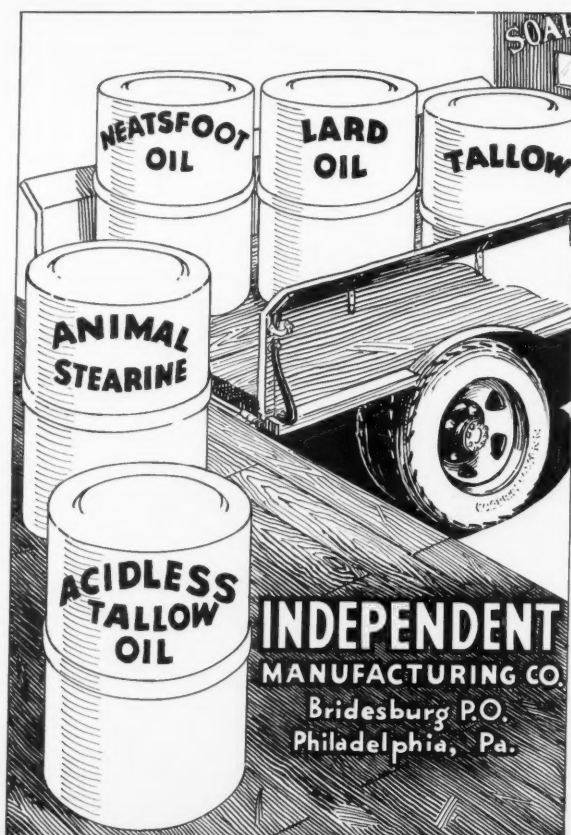


You will find the answer to this question, together with a full discussion of the whole subject of liquid soap concentration, on page 136 of the 1935 SOAP BLUE BOOK. The BLUE BOOK contains a vast amount of valuable reference material. Keep your copy handy and use it regularly. The answer is in your



SOAP BLUE BOOK

Free to "Soap" Subscribers



**INDEPENDENT
MANUFACTURING CO.**
Bridesburg P.O.
Philadelphia, Pa.

FUMERAL PRESSURE SYSTEM
CONNECTS TO STEAM OR
AIR PRESSURE LINE



Patented
Sept. 18, 1934

Additional
Patents Pending

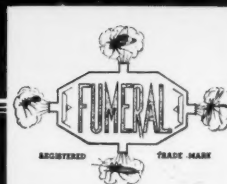
FUMERAL PRESSURE SYSTEM

Does a Thorough Job..... INEXPENSIVE — EFFICIENT — ECONOMICAL

● The effectiveness of any good spray solution depends upon the efficiency of your spray equipment. Wet sprays are not efficient. It takes a minimum of 30 lbs. (steam or air pressure) to diffuse spray solutions. THE FUMERAL INSTANT DIFFUSER instantly charges the entire room. No insects, flies, cockroaches, ants, moths or germs have a chance to escape. ● Connects to any steam or air line. Turn on the valve and in 4 minutes the operation is completed. ● No electricity to fuss with. No moving parts. Nothing to get out of order. FUMERALS stay sold. Simple — Inexpensive — More Efficient and Most Economical. Anyone can install it. Various brands of insecticides, germicides, bactericides, deodorants, disinfectants and perfumes all work well in the FUMERAL INSTANT DIFFUSER.

FUMERAL COMPANY, RACINE, WIS.

Manufacturers of Stationary and Portable Diffusers
Sanitary Consulting Engineers



For Sale—One Ferguson Packomatic semi-automatic carton filling, sealing and weighing machine with complete assembly. Equipped with Monitor elevator, bucket size 3 in. by 3 in., capacity 30 bags per hour, fully equipped with covered boot and ½ h.p. G. E. motor, 220 volts. Used but short time for packaging TriSodium Phosphate. Low price for quick sale. Write Baldwin Laboratories, Inc., Saegertown, Pa.

For Sale—Moth tab dipping machine, capacity one gross hour; crated, FOB cards, without motor, \$50.00. Rice & Co., San Antonio, Tex.

McKesson & Robbins, Inc., are proceeding with a recapitalization plan designed to eliminate accrued dividends on the company's \$3.50 preferred stock and to place the company in a position to begin regular payments at once on a new issue of preferred stock to be given in exchange for the old shares. The plan provides that 1¼ shares of the new preferred, paying \$3.00, ½ share of common and a cash payment of 50c will be given for each share of the present 7 per cent preferred issue.

The net earnings of Hercules Powder Company for the first nine months of 1935 were \$2,248,490 as compared with \$2,439,288 for the same period last year.

Bulk—

Shampoo Bases

Liquid Soap Base

Green Soft Soaps

Liquid Shampoos

Liquid Toilet Soaps

Scrubbing Soaps

*For Repacking and Jobbing—55
years' experience assures satisfaction*

GEO. A. SCHMIDT CO.

Manufacturers of  of Every Description

236-238 West North Avenue.
Chicago.

*High cost of Lavender
and the Fine Quality of
our product has won
many fine friends for*

Lavender L Parento at \$4 per lb.

*Write for your
sample to-day*

Compagnie Parento, Inc.
CROTON-ON-HUDSON, N. Y.

NEW YORK CITY DETROIT CHICAGO
LOS ANGELES SAN FRANCISCO
SEATTLE PORTLAND, ORE. TORONTO

We announce development of new type soap colors

PYLAKLORS

They have good fastness to alkali, light, tin, ageing.

The following shades are already available:

Bright Green	Dark Brown
Olive Green	Palm Green
Yellow	Golden Brown
True Blue	Violet

*It will pay you to send
for testing samples.*

PYLAM PRODUCTS CO., INC.

Manufacturing Chemists, Importers, Exporters

799 Greenwich St. New York City

Cable Address: "Pylamco"

Where to buy

RAW MATERIALS AND EQUIPMENT

for the Manufacture of Soaps and Sanitary Products

NOTE: This is a classified list of the companies which advertise regularly in SOAP. It will aid you in locating advertisements of raw materials, bulk and private brand products, equipment, packaging materials, etc., in which you are particularly interested. Refer to the Index to Advertisements, on page 128, for page numbers, "Say you saw it in SOAP."

ALKALIES

American Cyanamid & Chemicals Corp.
Columbia Alkali Co.
T. G. Cooper & Co.
Dow Chemical Co.
Eastern Industries
Hooker Electrochemical Co.
Innis, Speiden & Co.
Niagara Alkali Co.
Solvay Sales Corp.
Jos. Turner & Co.
Warner Chemical Co.
Welch, Holme & Clark Co.

General Chemical Co.
Grasselli Chemical Co.
Hooker Electrochemical Co.
Industrial Chemical Sales Co.
Innis, Speiden & Co.
Mechling Bros. Chemical Co.
Monsanto Chemical Co.
Niagara Alkali Co.
Philadelphia Quartz Co.
Solvay Sales Corp.
Standard Silicate Co.
Jos. Turner & Co.
Victor Chemical Works
Warner Chemical Co.
Welch, Holme & Clark Co.

AROMATIC CHEMICALS

American-British Chemical Supplies
Aromatic Products, Inc.
Compagnie Parento
Dodge & Olcott Co.
Dow Chemical Co.
P. R. Dreyer, Inc.
E. I. du Pont de Nemours & Co.
Felton Chemical Co.
Fritzsche Brothers, Inc.
Givaudan-Delawanna, Inc.
Magnus, Mabee & Reynard, Inc.
Monsanto Chemical Co.
Schimmel & Co.
Solvay Sales Corp.
A. M. Todd Co.
Ungerer & Co.
Van Ameringen-Haebler, Inc.

COAL TAR RAW MATERIALS

(Cresylic Acid, Tar Acid Oil, etc.)

American-British Chemical Supplies
Baird & McGuire, Inc.
Barrett Co.
T. G. Cooper & Co.
Innis, Speiden & Co.
Koppers Products Co.
Monsanto Chemical Co.
Reilly Tar & Chemical Co.
White Tar Co.

COLORS

Fezandie & Sperrle
Pylam Products Co.

BULK AND PRIVATE BRAND PRODUCTS

An-Fo Manufacturing Co.
Baird & McGuire, Inc.
Chemical Supply Co.
Clifton Chemical Co.
Davies-Young Soap Co.
Eagle Soap Corp.
Federal Varnish Co.
Franklin Research Co.
Fuld Bros.
Goulard & Olena
Harley Soap Co.
Hull Co.
Koppers Products Co.
Kranich Soap Co.
Palmer Products
Philadelphia Quartz Co.
John Powell & Co.
Geo. A. Schmidt & Co.
Uncle Sam Chemical Co.
White Tar Co.
Windsor Wax Co.

American Can Co. (Tin Cans, Steel Pails)
Anchor Cap & Closure Corp. (Closures & Bottles)
Cin-Made Corp. (Paper Cans)
Continental Can Co. (Tin Cans)
Ellis Davidson Co. (Perfume Disseminators)
Hinde & Dauch (Corrugated Fibre Products)
Maryland Glass Corp. (Bottles)
National Can Co. (Tin Cans)
Owens-Illinois Glass Co. (Bottles)
Wilson & Bennett Mfg. Co. (Steel Pails and Drums)

DEODORIZING BLOCK HOLDERS

Cin-Made Corp. (Paper)
Clifton Chemical Co.
Eagle Soap Corp.
Fuld Bros.
Palmer Products, Inc.

ESSENTIAL OILS

Aromatic Products, Inc.
Compagnie Parento
Dodge & Olcott Co.
P. R. Dreyer Inc.
Fritzsche Brothers, Inc.
Leghorn Trading Co.
Magnus, Mabee & Reynard, Inc.
Schimmel & Co.
A. M. Todd Co.
Ungerer & Co.
Van Ameringen-Haebler, Inc.

(Continued on page 126)

CHEMICALS

American-British Chemical Supplies
American Cyanamid & Chemicals Corp.
Columbia Alkali Co.
T. G. Cooper & Co.
Dow Chemical Co.
E. I. du Pont de Nemours & Co.
Eastern Industries

PROFESSIONAL DIRECTORY

PEASE LABORATORIES, Inc.

Chemists, Bacteriologists, Sanitarians

39 West 38th Street
New York

Food, Drug and Cosmetic Problems—Compliance with
Official Requirements—Meeting New and Anticipated
Competitions with Improved and New Products

H. A. SEIL, Ph.D

E. B. PUTT, Ph.C., B.Sc.

SEIL, PUTT & RUSBY, INC.

Analytical and Consulting Chemists

Specialists in the Analysis of Pyrethrum Flowers, Derris Root,
Barbasco, or Cube Root—Their Concentrates
and Finished Preparations

ESSENTIAL OILS

SOAP

16 East 34th Street, New York, N. Y.

STILLWELL AND GLADDING, Inc.

Analytical and Consulting Chemists

Members Association of
Consulting Chemists and Chemical Engineers

130 Cedar Street

New York City

APPLIED RESEARCH LABORATORIES, Inc.

DAYTON, N. J.

Bacteriology, Pathology, Physiology

Deodorant Coefficients (Packchuanian Method)

Disinfectant and Insecticide Tests

Toxicity and Skin Irritation Tests

Bioassays and Other Animal Studies

KILLING

strength of Insecticides

by PEET GRADY METHOD

(Official I. & D. code method) and
PYRETHRINS in PYRETHRUM FLOWERS
(by Gnadinger's Method)

We raised and killed more than 1 million flies in the last 2 years

ILLINOIS CHEMICAL LABORATORIES, INC.
75 E. WACKER DRIVE CHICAGO, ILL.

COST SYSTEMS

Designed and installed for Soap Manufacturers and allied
industries. Service in—Cost Analysis—Federal Taxation—
Audits and Financial Statements.

TWENTY-FIVE YEARS' EXPERIENCE

LOUIS J. MUEHLE & COMPANY

CERTIFIED PUBLIC ACCOUNTANTS
DES MOINES IOWA

CONSULTANTS

offering their services to manufacturers of
soaps and sanitary specialties should ap-
praise the industry of their facilities through
this professional card department. SOAP
reaches 2,200 manufacturers who need help
of a professional nature.

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*Analyses Development
Consultation Formulas*

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Entomological Testing Laboratories, Inc.

We offer you a medium for purchasing insecticides
on an intelligent basis.

Entomological testing by the Peet-Grady method, and
chemical examination of insecticides are available.

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New York, N. Y.

Skinner & Sherman, Inc.

246 Stuart Street, Boston, Mass.

Bacteriologists and Chemists

Disinfectants tested for germicidal value or phenol co-
efficient by any of the recognized methods.

Research—Analyses—Tests

Drop in on us at the 15th Exposition
of Chemical Industries, Grand Cen-
tral Palace, Booth 37, December
2-7, 1935.

Free tickets will be mailed on
request.

Foster D. Snell, Inc.
Chemists—Engineers
305 Washington St.,
Brooklyn, N. Y.

RAW MATERIAL AND EQUIPMENT GUIDE

(Continued from page 124)

NOTE: This is a classified list of the companies which advertise regularly in SOAP. It will aid you in locating advertisements of raw materials, bulk and private brand products, equipment, packaging materials, etc., in which you are particularly interested. Refer to the Index to Advertisements, on page 128, for page numbers, "Say you saw it in SOAP."

MACHINERY

Battle Creek Wrapping Machine Co. (Packaging Machinery)
Ertel Engineering Corp. (Filters, Mixers, Bottle Fillers)
Anthony J. Fries (Soap Dies)
Houchin Machinery Co. (Soap Machinery)
Huber Machine Co. (Soap Machinery)
International Nickel Co. (Monel Metal)
R. A. Jones & Co. (Automatic Soap Presses and Cartoning Machinery)
Package Machinery Co. (Packaging)
Proctor & Schwartz (Dryers)
C. G. Sargent's Sons Corp. (Dryers)
Stokes & Smith Co. (Packing Machinery)
U. S. Bottlers Machinery Co. (Bottle Filling and Cleaning)

P. R. Dreyer, Inc.
Felton Chemical Corp.
Fritzsche Brothers, Inc.
Givaudan-Delawanna, Inc.
Magnus, Mabey & Reynard, Inc.
Schimmel & Co.
Ungerer & Co.
Van Ameringen-Haebler, Inc.

PETROLEUM PRODUCTS

Atlantic Mfg. Co.
O'Connor & Kremp
Sherwood Petroleum Co.
L. Sonneborn Sons.

MACHINERY, USED

Consolidated Products Co.
Newman Tallow & Soap Machinery Co.
Stein-Brill Co.

PYRETHRUM AND DERRIS PRODUCTS

Insect Flowers and Powder, Pyrethrum Extract.
Derris Products

MISCELLANEOUS

Anchor Cap & Closure Corp. (Metal Caps)
T. G. Cooper & Co. (Waxes)
Dobbins Mfg. Co. (Pails, Mop Wringers, etc.)
General Chemical Co. (Fluorides)
General Naval Stores Co. (Pine Oil and Rosin)
Hercules Powder Co. (Pine Oil and Rosin)
Industrial Chemical Sales Co. (Decol. carbon, Chalk)
Innis, Speiden & Co. (Fumigants and Waxes)
Murray & Nickell Mfg. Co. (Moth Proofing Liquid)
Pylam Products Co. (Lathering Agent)
Rohm & Haas Co. (Insecticide Base)

An-Fo Mfg. Co. (Extract)
R. J. Prentiss & Co.
McCormick & Co.
McLaughlin, Gormley, King Co.
John Powell & Co.
Sherwood Petroleum Co.

SOAP DISPENSERS

Clifton Chemical Co.
Eagle Soap Corp.
Fuld Bros.
Palmer Products

OILS AND FATS

T. G. Cooper & Co.
Eastern Industries
Independent Mfg. Co.
Industrial Chemical Sales Co.
Leghorn Trading Co.
Michel Export Co.
Murray Oil Products Co.
Newman Tallow & Soap Machinery Co.
United Africa Co.
Welch, Holme & Clark Co.

SODIUM SILICATE

General Chemical Co.
Grasselli Chemical Co.
Mechling Bros. Chemical Co.
Philadelphia Quartz Co.
Standard Silicate Co.

PARADICHLOROBENZENE

Dow Chemical Co.
E. I. du Pont de Nemours & Co.
Hooker Electrochemical Co.
Monsanto Chemical Co.
Niagara Alkali Co.
Solvay Sales Corp.
Jos. Turner & Co.

SPRAYERS

Breuer Electric Mfg. Co.
Dobbins Mfg. Co.
Fumeral Co.
Hudson Mfg. Co.
Lowell Sprayer Co.

PERFUMING COMPOUNDS

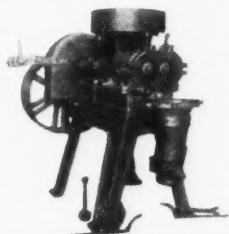
Aromatic Products, Inc.
Compagnie Parento
Dodge & Olcott Co.

TRI SODIUM PHOSPHATE

General Chemical Co.
Grasselli Chemical Co.
Monsanto Chemical Works
Victor Chemical Works
Warner Chemical Co.

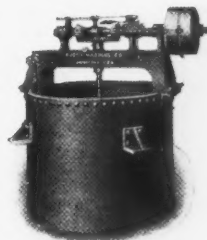
Beat High Labor Costs with INCREASED PRODUCTIVE EFFICIENCY!

With wages of workers steadily mounting, it is essential that you maintain machine efficiency high to keep the total of your production costs in line. It is particularly poor economy now to keep old machinery in use—clogging your production line and leading to costly delays.



This sturdy Rutchman plodder is built to last. No heavy repair bills or breakdowns to pile up costs. Standard equipment in American soap factories since 1860.

Huber Crutcher. Not the cheapest, perhaps, but in the long run will prove its economy through many years of trouble-free operation. We also offer a handy dry mixer.



HUBER MACHINE CO.

265 46TH STREET

BROOKLYN, N. Y.

The Chemistry of Laundry Materials

by D. N. JACKMAN

A discussion of materials used in the laundry, starting with water and going through alkalies, soaps, bleaches, starches, etc. The book contains valuable information on the chemistry of laundry materials, not stopping with the well-established products but discussing as well the newer detergents and assistants for scouring and washing, giving information on the so-called synthetic soaps and the other products which now form the great number of newer detergents. 240 pages, \$2.50 per copy.

Send Check with Order

MACNAIR-DORLAND CO.

254 West 31st Street New York City

List of other books on request

HULL METAL POLISH

in powder form.

Save the cost of shipping water.

Buy your polish in powder form
and add the water yourself.



THE HULL COMPANY

305 Washington Street
Brooklyn, N. Y.

Fatty Alcohols

Cetyl

Oleic

Stearic

Lanolic

Cholesterol



MICHEL EXPORT COMPANY, Inc.

95 BROAD STREET

NEW YORK CITY

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Every effort is made to keep this index free of errors, but no responsibility is assumed for any omission.



Atlantic City's Ideal Convention Hotel on the Boardwalk

Every facility for the perfect handling of your convention or conference combined with an efficient hotel service.

Spacious comfortable lounges . . . dining salons . . . ball-rooms . . . sun parlors . . . sun decks . . . excellent cuisine.

Swimming Pool -- Salt Water Baths -- Golf
Tennis -- Fishing -- Horse Back Riding

For detailed information and special rate plan
address the management.

The President

ATLANTIC CITY, NEW JERSEY

Traveling Men Prefer the LORD BALTIMORE HOTEL

In Parlor Car or Club, wherever commercial travelers gather, you'll hear someone recall his last stay at Lord Baltimore Hotel with pride. Restful comfort, and fine food -- all at moderate rates.

H. N. BUSICK
Managing Director

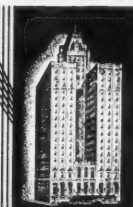
700 Rooms with Bath and Radio

FROM \$3 SINGLE

BALTIMORE

MARYLAND

OUR RESTAURANTS
EQUIPPED TO SERVE
5000 PEOPLE DAILY



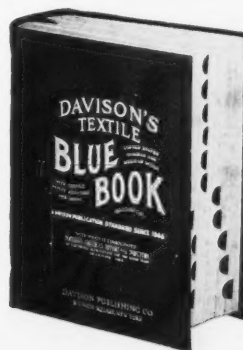
GARAGE ATTENDANT
WILL TAKE YOUR
CAR AT THE DOOR

New Soap Markets for You!

All textile mills, dyers, finishers and printers in the United States and Canada are fully reported in the New DAVISON'S TEXTILE BLUE BOOK and Dockham's American Report and Directory. 69th year.

Hundreds of mills and dyers are big consumers of soap. A circular letter or a salesman calling on this field will pay you well.

Fifteen hundred pages in size, thumb indexed for quick reference, strongly bound and with information arranged for instant use, this volume will make money for you in providing accurate and complete information in the entire textile manufacturing, dyeing and finishing trades.



Actual photograph. Fifteen hundred pages of reports, lists, statistics and indexes

"A Davison Publication — Standard Since 1866"

Davison's Textile Blue Book

Office Edition \$7.50

Handy Size \$5.00

Special Salesmen's Directory \$4.00

50 UNION SQUARE NEW YORK

Cables: "Davitex"



I BUY CLOSE

They tell me I "buy close" when it comes to purchasing supplies. Perhaps so, but the "P. A." title doesn't mean that I must try to get something for nothing. I know it can't be done. I am, however, a careful buyer. And that is why I always buy Hinde & Dauch shipping boxes. Without a doubt, H & D boxes offer soap manufacturers the greatest value on the market. Take a tip from a friend—write them the next time you're in the market. Their boxes will help sell your product.



Send FOR YOUR COPY NOW!

THE HINDE & DAUCH PAPER CO.

215 Decatur Street, Sandusky, Ohio

Send me your book "Modern Box Design"

Name _____

Company _____

Address _____

City _____

State _____

Here and There

BEHIND the desk of a well-known soap executive on the wall of his office hangs the following motto, neatly framed: "Work hard eight hours a day and don't worry. . . . Soon you will become boss and you can work twelve hours a day and worry."

Colloidal gold, silver, and other precious metals are now available for use in cosmetics, beauty soaps, and the like. They are reputed to do that certain something to the skin. Imagine what an opportunity this is for some of our modern advertising copy writers . . . "our soap contains pure gold" . . . "have that gold plated complexion" . . . it would certainly supply a new advertising note.

By the way, have you sent in that check yet for your subscription renewal? When you receive a notice that your subscription will soon expire, why not shoot in your renewal right away so that you will not file it away, and forget it,—and possibly miss an issue or two of SOAP?

Teaching your salesmen how to use their time to best advantage is a subject covered by Dartnell Service in a recent brochure on "Teaching Salesmen Time Control". Mighty interesting and instructive. It seems that about five hours per day, or 1,920 hours per year is the maximum time that a salesman can spend in actual selling,—just about twenty per cent of his total available time.

In thinking about advertising for 1936, give also a little thought as to what membership in the A.B.C.—Audit Bureau of Circulations,—means when you use space in trade magazines. If you will investigate, you will find that practically all the outstanding general magazines and most leading trade papers are members of the A.B.C. SOAP is a member. When you buy advertising space, why buy a pig in a poke?

